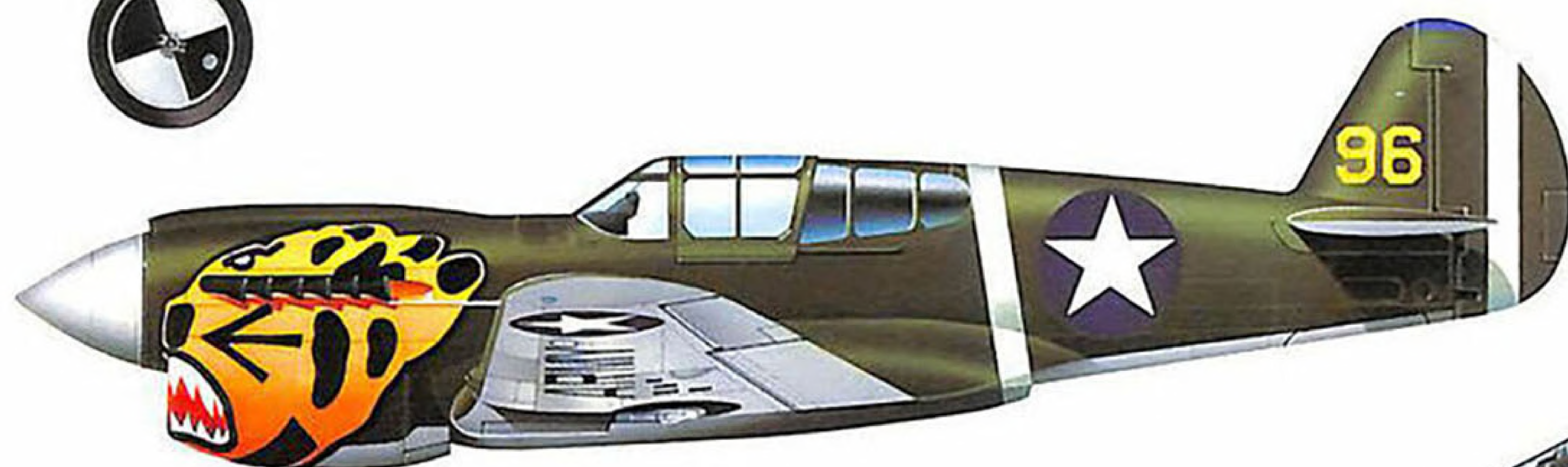
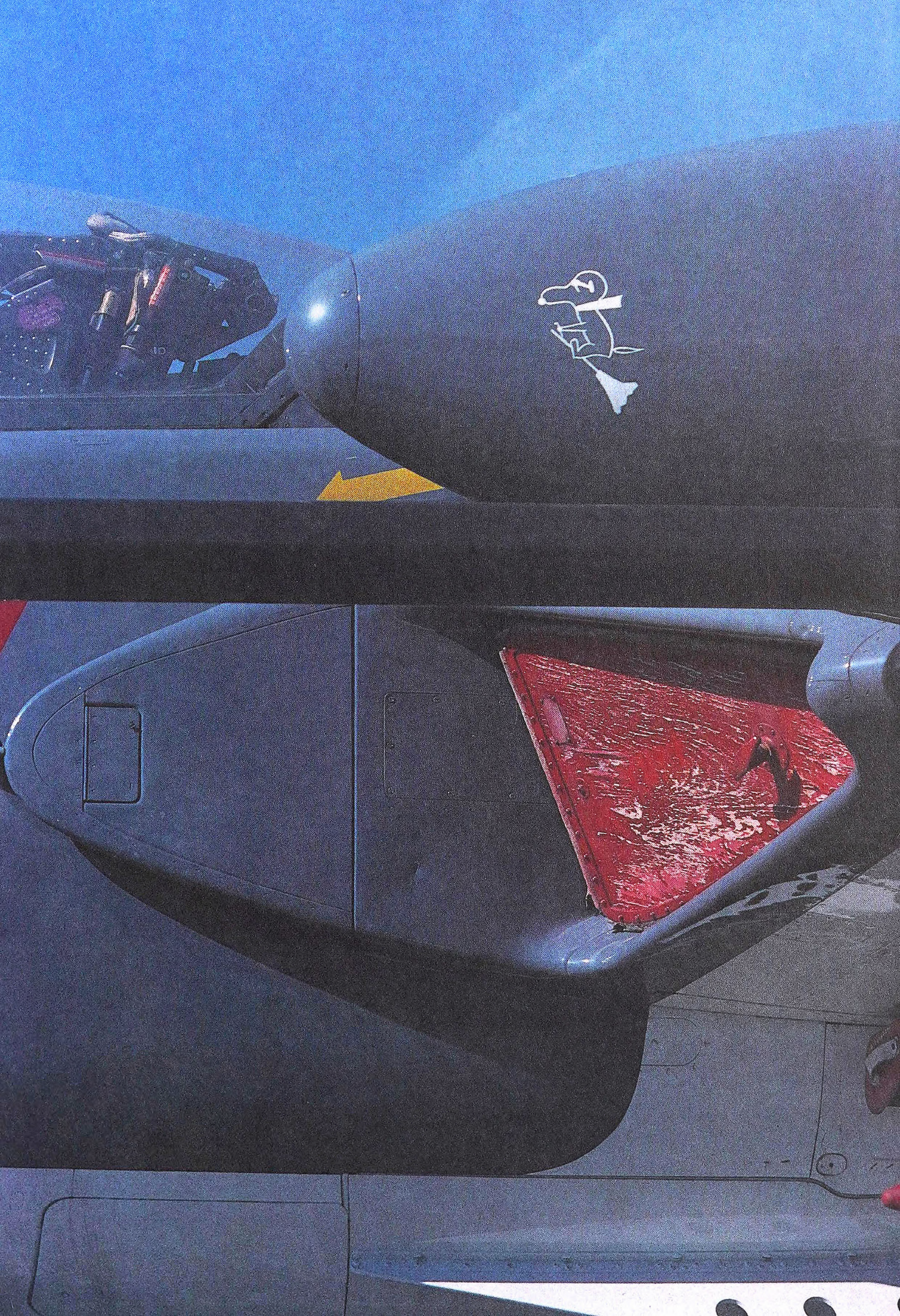


MILITARY AIRCRAFT MARKINGS & PROFILES



BARRY C WHEELER





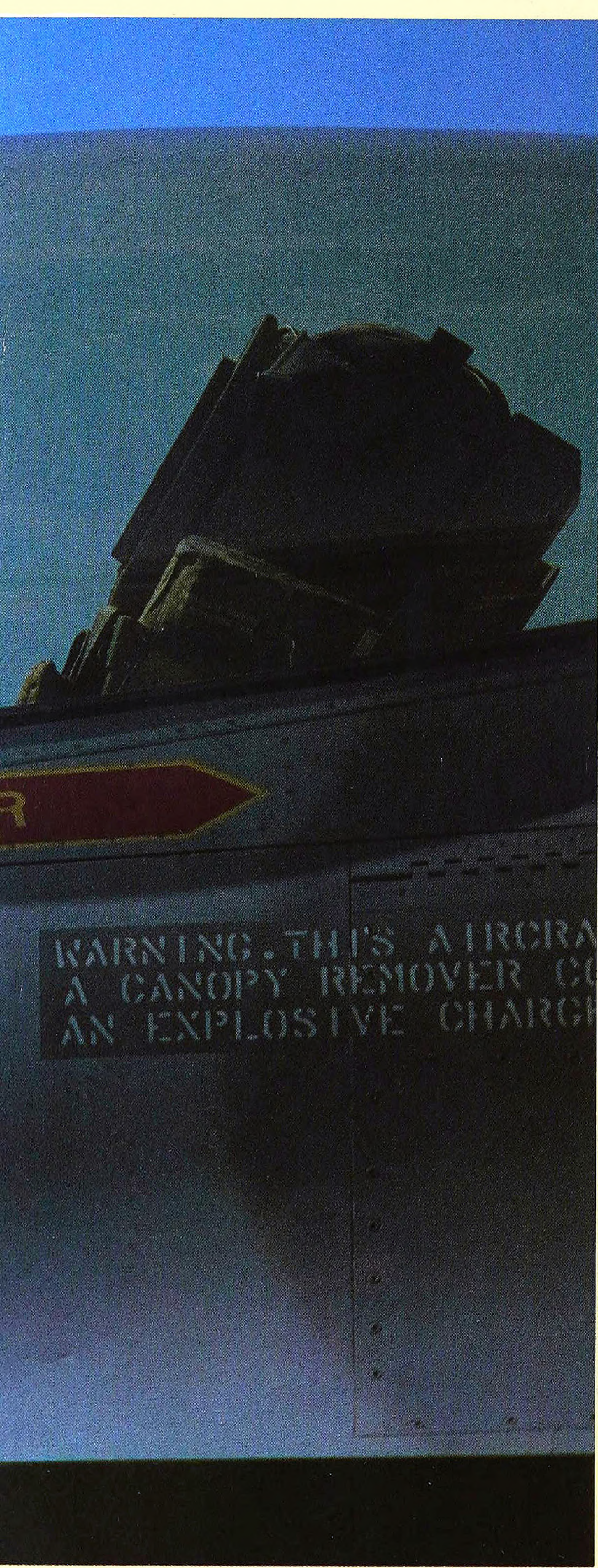


MILITARY AIRCRAFT MARKINGS & PROFILES

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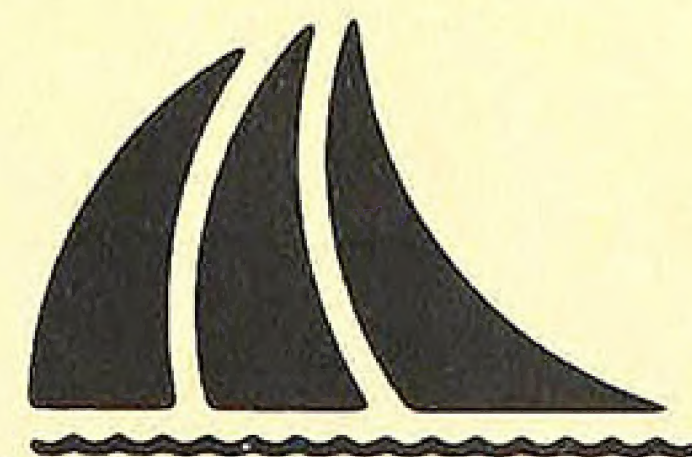
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1. PUSH BUTTON TO OPEN DOOR
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JETTISON CANOPY



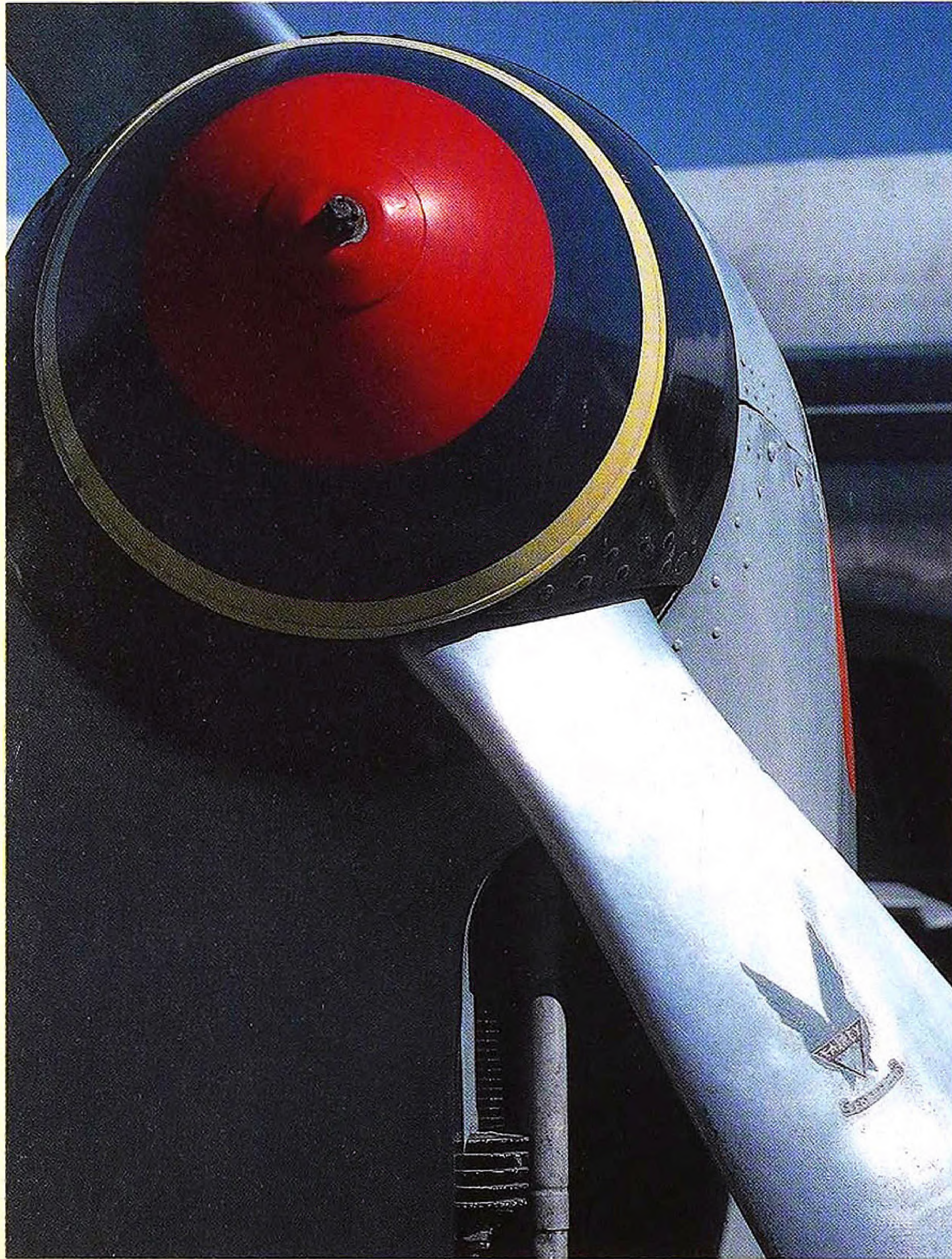
MILITARY AIRCRAFT MARKINGS & PROFILES

BARRY C WHEELER



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PREFACE

If I was in charge of tactics, I would spray all fighter aircraft light gray, reduce the size of the national insignia and delete *all* unnecessary external colors and markings and that includes all those bright squadron badges!" That quote is by an official UK camouflage specialist who has the survivability of the aircrews as his first priority and on reviewing the current trend in color schemes on modern military aircraft he has almost achieved his aim.

Counter-shaded gray has become the principal paint scheme for many types of Western Alliance-operated combat aircraft, and trials have proved that of all the schemes considered in recent years, this one provides the most concealment, both air-to-air and air-to-ground. However, *esprit de corps* remains an essential part of military life and in peacetime, colorful markings are still widely used.

Aircraft markings and colors hold a fascination for enthusiast and casual observer alike. The design is limitless and is almost an art form. Although conformity is a military watchword and most squadron commanders try to achieve a uniform standard of finish on their aircraft, virtually no two are identical. This may be because of different paint schemes, a change of unit markings from one machine to the next, air and ground crew names applied on the fuselage sides or maintenance and safety stenciling applied in slightly different places on the airframe.

Esoteric perhaps, but to an aircraft enthusiast, these differences form the spur which extends his interest. It makes the aircraft individual and lifts the subject out of the boring sameness which can haunt other hobbies. Even

officialdom now realizes that there is much to gain in goodwill and support by encouraging these enthusiasts. So much so that there are an increasing number of Western air forces that paint military aircraft in special "one-off" schemes to commemorate anniversaries or particular events.

Like the knights of old, markings on aircraft have become heraldic symbols of ownership and have developed steadily since the airplane first went to war in 1914. Alongside the story of the markings is the evolution of camouflage for the two subjects are inter-related, and to concentrate more on one than the other would be to tell only half the story.

Why are aircraft painted and marked? The answer is, for a number of reasons, but basically to protect the airframe against corrosion, assist in concealment from an enemy and to provide some form of national or unit identity. Markings were the first to appear, followed by camouflage, the latter being a derivation of the French *camoufler* – to disguise. Most of the color schemes have been the result of particular requirements such as for aircraft operating over certain types of terrain like the jungle or the desert, or for special roles.

Given today's modern, high-performance combat aircraft, it would perhaps be logical to think that there is no real need for camouflage. After all, missiles are fired at targets beyond visual range and most tacticians argue that the day of the old-fashioned dogfight is now long past. That may be so, but at low level, under the radar, a fast-moving aircraft will need all the protection it can get if it is to reach its target, deliver its weapons and escape unde-

tected. An enemy on patrol will be looking out for just such an intruder, and if he is painted in the wrong color scheme, the old clichéd "Mk 1 eyeball" could more easily pick him out against the background clutter.

Markings as well as camouflage have changed over the last 70 years. Basic national insignia, the most obvious and widespread form of marking to indicate ownership, was first used in the early years of this century and continues to be applied, mainly to the wings, fuselage and tail. Some insignia remain almost unaltered in design since they were first adopted during the First World War, others have changed either to reflect a move to a new national political status, or the size has diminished to provide a less visible marking which would not compromise the camouflaged finish.

In addition to the national insignia, aircraft often carry badges, both official and unofficial. Also airframe stenciling, from the very basic NO STEP warning, to large panels giving detailed instructions for arming or maintaining the aircraft.

The first part of this book looks at the background to current marking and camouflage and is related to the aircraft's role. Since color is task orientated the sections highlight the various changes undergone by the types over the last 70 years or so.

The second part is a reference to the colors themselves in the form of profiles showing the often wide-ranging types of camouflage applied to different aircraft. The profiles have been chosen to give as broad a view as possible and where it is considered relevant, official color specifications are included in the captions.

COLORS OF WAR AND PEACE

Single seat fighters have always been regarded as the elite among aircraft and from the earliest days of military flying, flamboyant markings have often been the hallmark of the breed. The forerunners of fighters were called scouts and the British Expeditionary Force took some to France at the outbreak of the First World War in August 1914, attached to reconnaissance units of the Royal Flying Corps. Their markings were limited to a black number applied to the tail over buff-colored, clear-doped linen fabric. Nobody had seriously considered the use of camouflage at that stage and generally national markings were not thought necessary. This all changed in the first weeks of the conflict when any aircraft flying over the lines attracted ground fire from friend and foe alike.

The French and the Germans introduced the first practical national markings; one meter diameter roundels of red, white and blue had appeared on French military aircraft as early as 1912, and the black and white cross *patée* was adopted by the German Air Service from the first weeks of the war.

Two months after the start of the war, Field HQ in France directed that British aircraft were to have the Union Jack marking painted under the lower wings. This insignia might have survived if the St George's Cross in the flag had not appeared similar to the German cross at a distance.

The RFC finally decided that the concentric circle marking was by far the best form of insignia and following agreement with the French, the roundel was adopted but with the colors reversed, red in the center, white and a blue outer ring. During the changeover period, aircraft on the Western Front were often noted with both roundels and 24in x 18in flags painted under the wings. Eventually the roundel remained and was also applied to the sides of the fuselage – clear of the cockpit after the crews felt it provided an ideal target for enemy gunners to aim at – and supplemented with rudder striping, blue being next to the rudder post followed by equal width bands of white and red.

Despite changes of color shade and marking size over the years, the three countries – Britain, France and Germany – still retain the basic insignia.

Camouflage came late in 1915, when the German Air Service introduced a two-color disruptive scheme of green and brown with

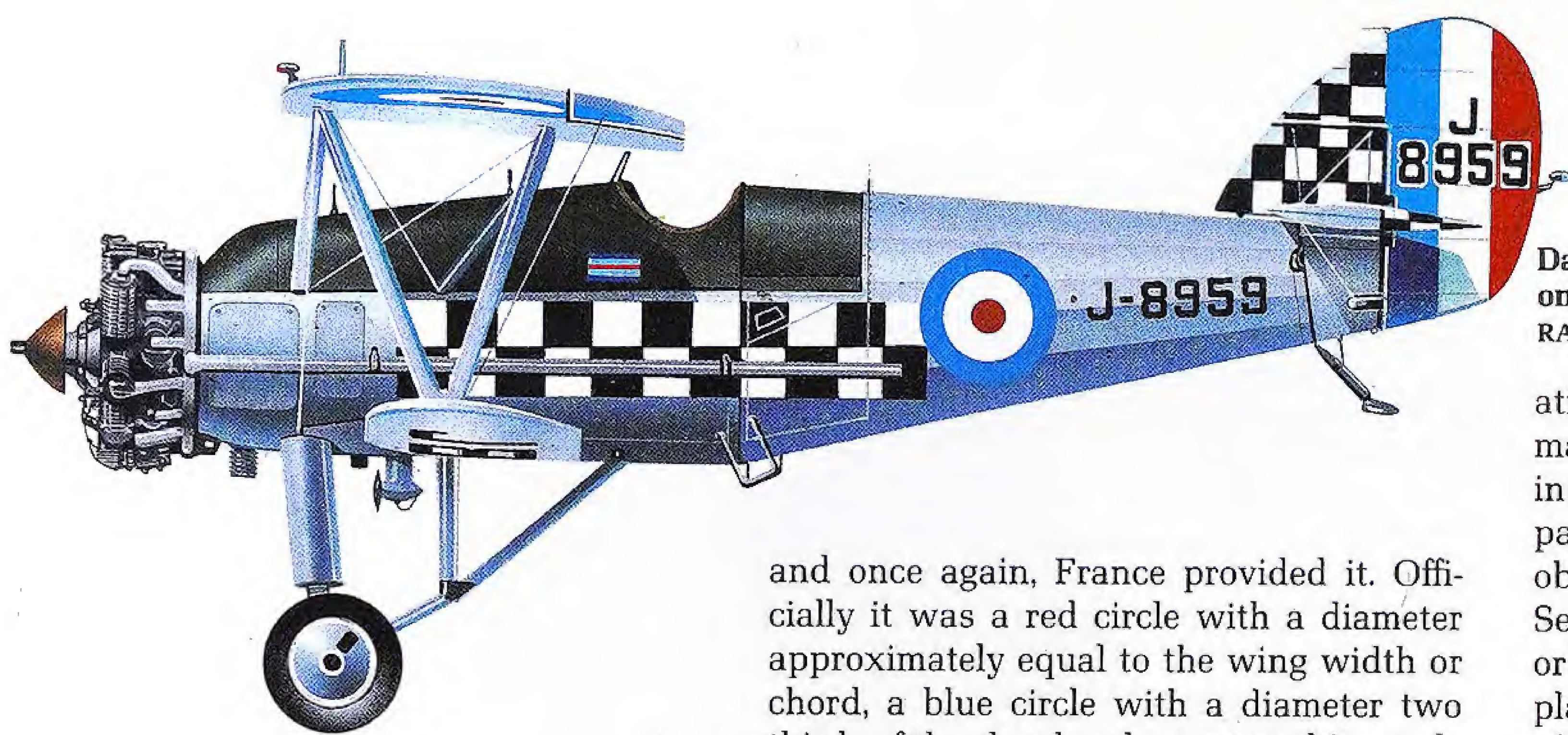
a light blue on the under surfaces; mauve or purple replaced the brown later in the war.

The RFC adopted camouflage early in 1916, usually with a dark top surface color varying from green to khaki and natural finish under surfaces. This may seem an obvious combination now, but in those early days, nothing like it had been tried before and it involved hundreds of aircraft. Size was also a factor when it came to the wing roundel, which was quite often painted the full width of the upper and lower wings, thereby almost totally negating the effect of concealment.

The German's flying circus

Something more radical came towards the end of 1916. This was the "Circus". Groups of brightly painted fighting aircraft flown by ace pilots operated along the Front and concealment was set aside as individual pilots tried to outdo each other by way of color and design. As many as four *Jagdstaffeln* ("Jastas", or scout squadrons), with perhaps 50 aircraft, combined to achieve local superiority and most were flamboyantly marked, as shown in combat reports made at the time covering such types as Fokker Triplanes, Albatros and Pfalz scouts. For example *Jagdstaffel* 1 – red noses and wings; *Jagdstaffel* 2 – bright yellow bellies; *Jagdstaffel* 3 – black and white checks on fuselage; *Jagdstaffel* 4 – black snake-line over gray on fuselage.





Day fighter scheme on an inter-war RAF Siskin.

and once again, France provided it. Officially it was a red circle with a diameter approximately equal to the wing width or chord, a blue circle with a diameter two thirds of the chord and a center white circle with a diameter one third of the chord. Vertical equally spaced rudder stripes were added, red leading, and commonality with other Allied aircraft was complete. It was to be 1919 before the US Air Service readopted the star-and-red-disc design first used within the United States from May 1917.

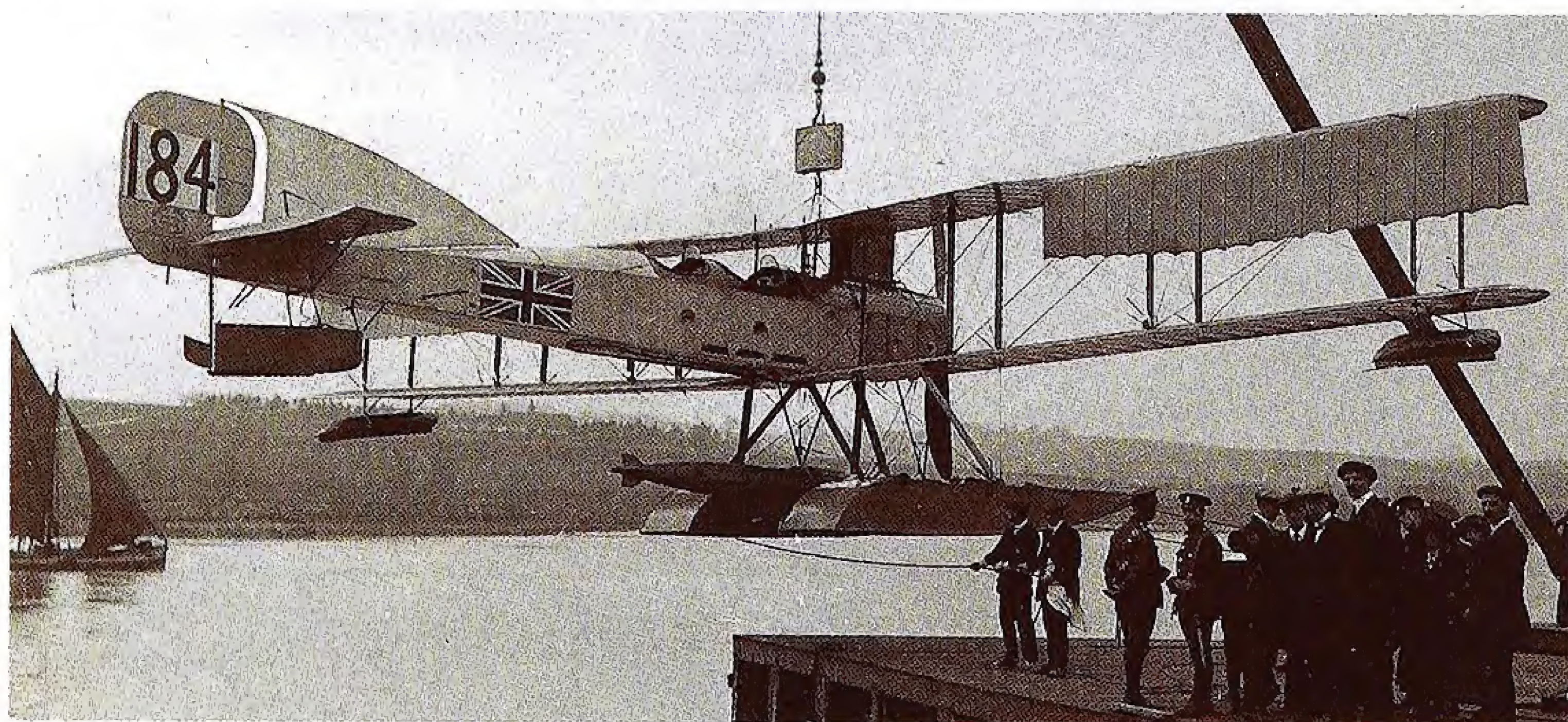
The years after 1918 saw the consolid-

ation of national markings among the major powers and in many cases unit insignia were ordered to be applied in particular sizes, styles and locations to obtain some orderliness. For example, in September 1923, the US Army issued an order governing formation of unit insignia placed on aircraft and designs to be officially approved. A year later the US Navy standardized on a number-letter-number form of squadron marking for ease of identity. In March 1927, the Air Ministry decreed that serial numbers were to be marked under the wings of all RAF aircraft and to be read from opposite ways, port and starboard.

Some markings came and went as the fortunes of the countries changed. Estonia, Latvia and Lithuania all had air forces until these countries disappeared, while conflicts such as the Spanish Civil War produced insignia for both sides. Unless a nation was at war, camouflage was not high on the list of official priorities. In the USA, bright colors were widely adopted by the pursuit squadrons, while the British fighter units retained a more sober appearance of a silver finish with carefully applied squadron markings on wings and fuselages.

Fighter colors and markings during the Second World War were of almost infinite variety and the diversity of both can be seen in the color pages. Considerable research was undertaken by a number of countries to try and establish the best types of camouflage for particular areas of operation. For day fighters, most research

France too chose a two-color camouflage for its front-line scouts, although the fuselage sides were saved for unit or personal insignia (hardly of the same caliber as their German counterparts). With the United States entry into the war in 1917, an appropriate national insignia was required



Above: Union Jack insignia on a Shorts 184 seaplane.

Below: The white dumbbell on these Sopwith Camels was a form of quick identification.



showed that light colors such as white, sky-blue, blue-green and light gray best suited the under surfaces, but top surface colors varied considerably between air forces as different solutions were arrived at. Green was a common color, often combined with other shades to form a disruptive scheme for overland operations.

The RAF decided on brown and green initially, changing to gray and green in 1942 for offensive operations over the English Channel. To reduce mis-identification, a light-colored band was painted around the rear fuselage and was later supplemented by yellow bands along the leading edges of the wings. Large code letters were applied to the fuselage sides and the basic RAF roundel took on various forms with yellow being added in some cases and the white being deleted in others. Desert colors – two shades of brown – tended to be used in North Africa. Late in the war, “southern Pacific” schemes were predominantly white.

Gray fighter schemes

German thoroughness had deduced that gray formed a useful neutral color and this was introduced onto fuselages of Luftwaffe fighters quite early in the conflict, combined with a “splinter” or hard edged pattern of two greens applied to the upper surfaces of the wings and tailplanes. The cross patée of the First World War gave way to a straight edged design and the swastika insignia of the National Socialist party was painted on the fins or rudders of all aircraft. The Luftwaffe used a number and symbol system to identify aircraft in a unit and badges were widely employed. However, as the war progressed and fighter units were moved around the gradually diminishing Reich, so camouflage took on a much more *ad hoc* appearance with units in the field adopting schemes which were felt to be most applicable to the terrain over which they flew. Quite often the black was painted out of the national insignia or plain black outline markings were used, depending on the background camouflage of the aircraft, the individual pilot or the local unit commander. Units operating in North Africa followed the Italian example and sprayed their aircraft in a desert finish comprising a brown usually with a mottled darker color to give a disruptive finish. “Theater bands” showed operational areas.

Germany's allies, Italy and Japan both used distinctive markings to identify their nationality. The former had a prominent white cross on the tail and three black fasces in a circle on the wings. A white fuselage band was an added feature on which many units painted their squadron number and individual aircraft number.

On the other side of the world, Japan's blood red “meatball” as the Americans were to call it, appeared on all Army and Navy-operated aircraft and apart from

US aircraft carrier Langley during the inter-war period.



outlining variations, remained consistent throughout the war and continues in use today. Green was a dominant color in Japanese camouflage although towards the end of the war unpainted fighters were regularly encountered by the Allies as the urgent need for replacement aircraft prevented the standard application of protective camouflage.

Before the United States entered the Second World War, orders were issued to change some of the basic national markings. This included the positioning of the star insignia above the port and below the starboard wings, applying it on the fuselage sides and abolishing the rudder striping on Army Air Corps aircraft. Later orders called for the deletion of the red center in the insignia to prevent any confusion with the Japanese marking and, because shape is dominant to color, white rectangles were added to the sides of the blue circular field and a red border was painted around the whole design. The red was changed shortly afterwards to blue and this marking was retained until after the war. American camouflage centered generally around green upper surfaces and gray underneath. Fighter units in Europe using a squadron letter code for identification fell in line with RAF practice. Unofficial personal nose art was a particularly American speciality. In the early days, concealment on the ground from marauding Luftwaffe intruders was a requirement, but as the Allied domination of the skies became more widespread, so the need for camouflage faded and early in 1944, a natural finish for USAAF aircraft was

ordered. Against Japan in the Far East, USAAF fighters retained similar colors to those in other war theaters. However, US Navy fighters used blue as a basic camouflage for Pacific island-hopping operations, starting with quite light shades but ending in 1945 with a scheme of dark glossy sea blue overall.

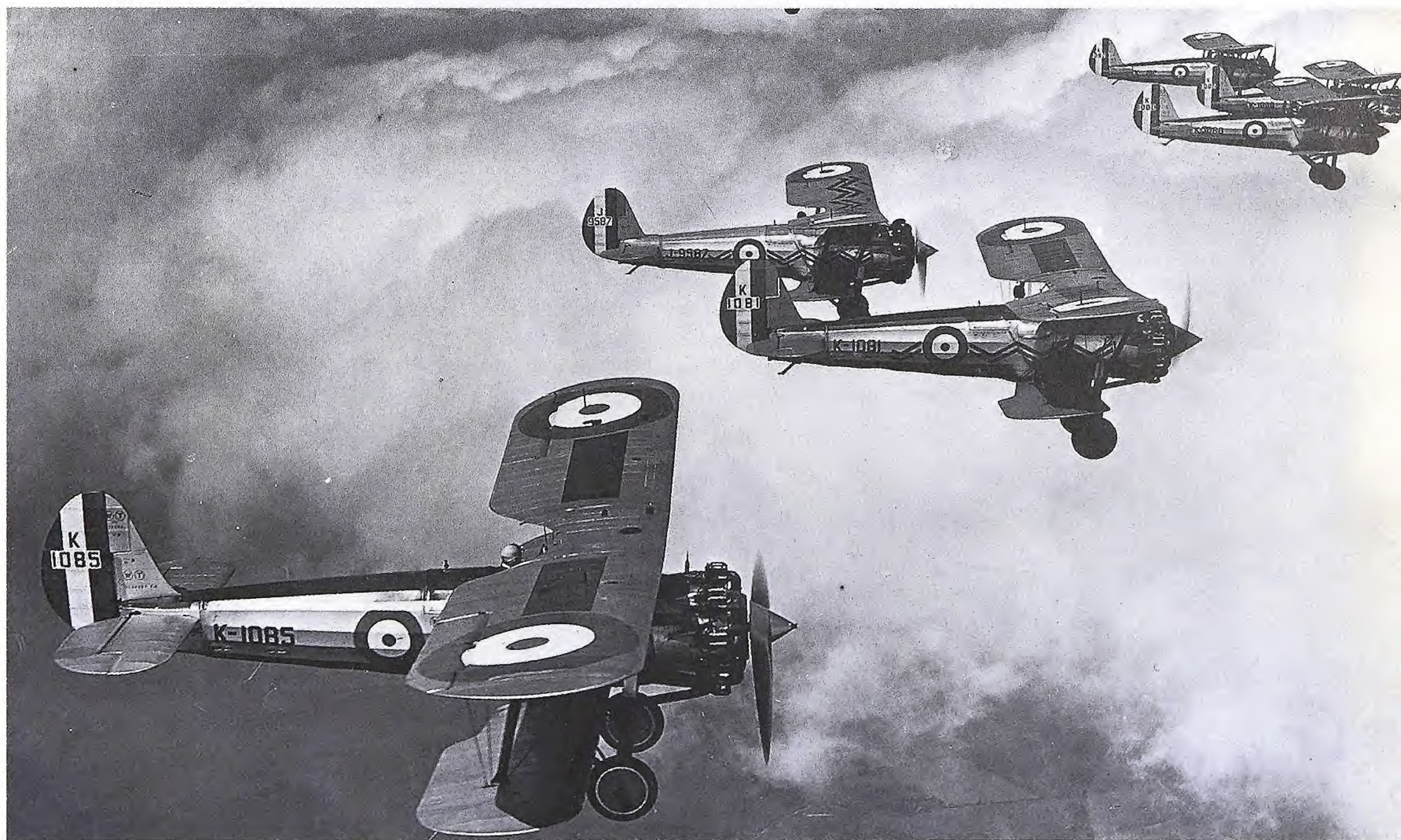
In the post-war years, natural finishes appeared again with squadron markings applied on the fuselages of the RAF's early jet fighters together with some revision to the sizes of the national insignia. As the Cold War increased tension, so there was a general move back towards disruptive schemes and from the early 1950s, green and gray camouflage returned and with some variations, has remained on RAF tactical aircraft to the present day. Consistent

Bristol Fighter in post-war finish.

with high speed, the RAF Lightning force retained the polished natural metal finish of previous years until the mid 1970s, when these aircraft received a coat of gray and green to undertake the low-level intercept role.

During this period, research in the UK showed that if an aircraft was painted light gray overall it would be better camouflaged against the sky than with the green/gray scheme. In 1979, an RAF Phantom was sprayed in a counter-shaded gray scheme, the top surface of the inner wing section being a darker shade of gray than on the outer sections with an even lighter shade

Silver-doped Bulldog fighters of the RAF.





on the undersurfaces. Detection of this aircraft at a distance was significantly more difficult compared with others with existing schemes. To complete the effect, markings were toned down and reduced in size. RAF Phantom, Tornado and Hawk air defense aircraft are now finished in gray and similar colors have been adopted by a number of other air forces.

The United States Air Force also concluded that gray was the answer to reduced detection for fighter aircraft. Air superiority blue was tried initially, but gray eventually won the day and today, both USAF and US Navy types fly in this scheme. Unlike the toned-down colors used by the RAF, American aircraft have just a simple gray or black outline national insignia, small enough to be virtually undetectable at combat ranges.

BOMBERS

As an instrument of power, the bomber aircraft has played a major role in international affairs and in its highly advanced form today continues to command a healthy respect from potential enemies. The heyday of the conventional bomber was

undoubtedly the Second World War when fleets of large four-engined aircraft contributed substantially to the defeat of the Axis forces in Europe and Asia. During that period, bombers operated both day and night and colors and markings reflected this.

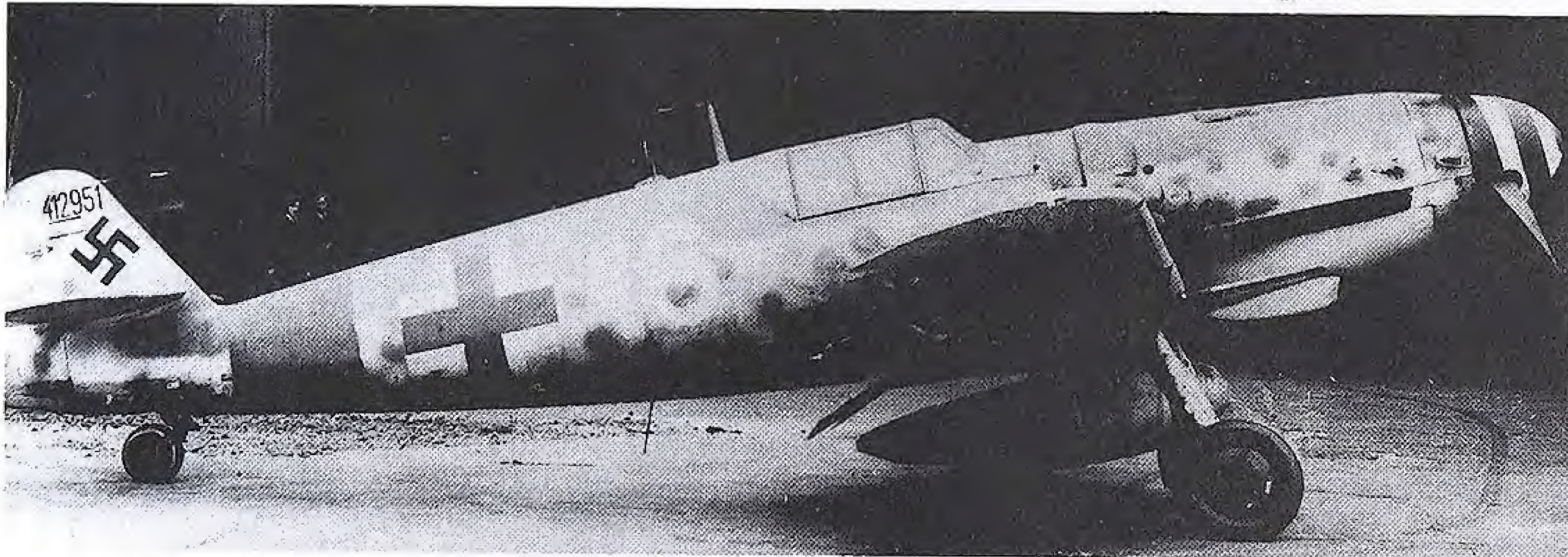
The RAF adopted night bombing in the belief that under the cover of darkness, aircraft and crews would stand a greater chance of success. To help provide some form of visual protection, Black was applied to all aircraft engaged in these operations with dark green and dark earth forming a disruptive pattern over the top surfaces. This color combination replaced the overall dark green or "Nivo" scheme which the Service had used on its heavy bombers in the inter-war period. Rather strangely this coloration was found to be ideal for night use, given the slight luminescence which is usually present at night and even more so on moonlit nights.

America's strategic bombing campaign from 1942 was almost entirely flown in daylight, but camouflage gave the B-17s and B-24s virtually no protection and had it not been for the development of the long-range escort fighter, losses would have

Dauntless dive-bombers of the USMC in 1943 colors.

eventually halted this element of the offensive against Germany. What the olive drab paint did achieve on the aircraft's top surfaces was to help conceal the big aircraft on the ground from occasional forays by Luftwaffe intruders, but even this threat was thought negligible by 1944 and new aircraft were delivered from the USA in a natural finish. Both RAF and USAAF bombers carried identifying codes and in the case of the latter, bright tail markings to assist with unit identification when flying in the large combat box formations.

The Luftwaffe had conducted a number of trials to determine the best color and patterning for its warplanes and had concluded that a combination of greens would form the ideal daylight camouflage. *Schwarzgrün* and *dunkelgrün* applied in a splinter pattern over the top surfaces and a light blue or *hellblau* underneath became standard by the beginning of the war and remained in use with certain variations until 1945. The bomber units were essentially daylight orientated until the night blitz of London in 1940; for this black undersurfaces were adopted and the white in the



WWII adversaries – the RAF Spitfire (*above*), and (*left*), a late-war Luftwaffe Bf 109G.

roundels while serials were marked large under the wings. Even the first Canberras took on the black-gray colors until natural metal finish became standard. American supplied B-29s (known in the RAF as Washingtons), were delivered unpainted and remained so except for small areas of color on the fin tip indicating the squadron.

Anti-flash white was the color used on the V bombers (Valiant, Victor and Vulcan) to protect them from the results of a nuclear explosion rather than for any reason of concealment (on the ground the white aircraft stood out dramatically). This finish complete with its low-visibility markings, gave way in 1964 to a scheme in keeping with the switch from high-level to low-level bombing – dark green and medium sea gray over all top surfaces while white was retained underneath. Other changes ensued during the following years and all were to reflect the need for reduced visibility in the air.

national markings was painted out. Four letter codes applied at the factory were changed to comply with a unit identification system when aircraft were delivered to squadrons and examples of these can be found in the color section. Official unit badges were another form of identity.

Some units did adopt non-standard camouflage, such as the Heinkel He 111 unit in France which painted large white clouds over the green upper surfaces of its aircraft and Ju88s appeared with areas of light gray over the factory finish. A white finish was usual for most types of German aircraft on the Russian Front when the

winter snows began and by the time it had ended, those aircraft that had survived often looked extremely worn and shabby with the basic undersurface color showing through.

Post-war colors

In the post-war period, the RAF found it difficult to shake off its wartime image and Bomber Command Lancasters, Lincolns and Mosquitos all retained black undersurfaces but with gray replacing the green-brown scheme on the top. The dull red squadron code letters now appeared in white and white also reappeared in the



Above: USAF F-15 fin with the Bitburg base code.



Above: Royal Navy Sea Harrier in pre-Falklands color scheme.

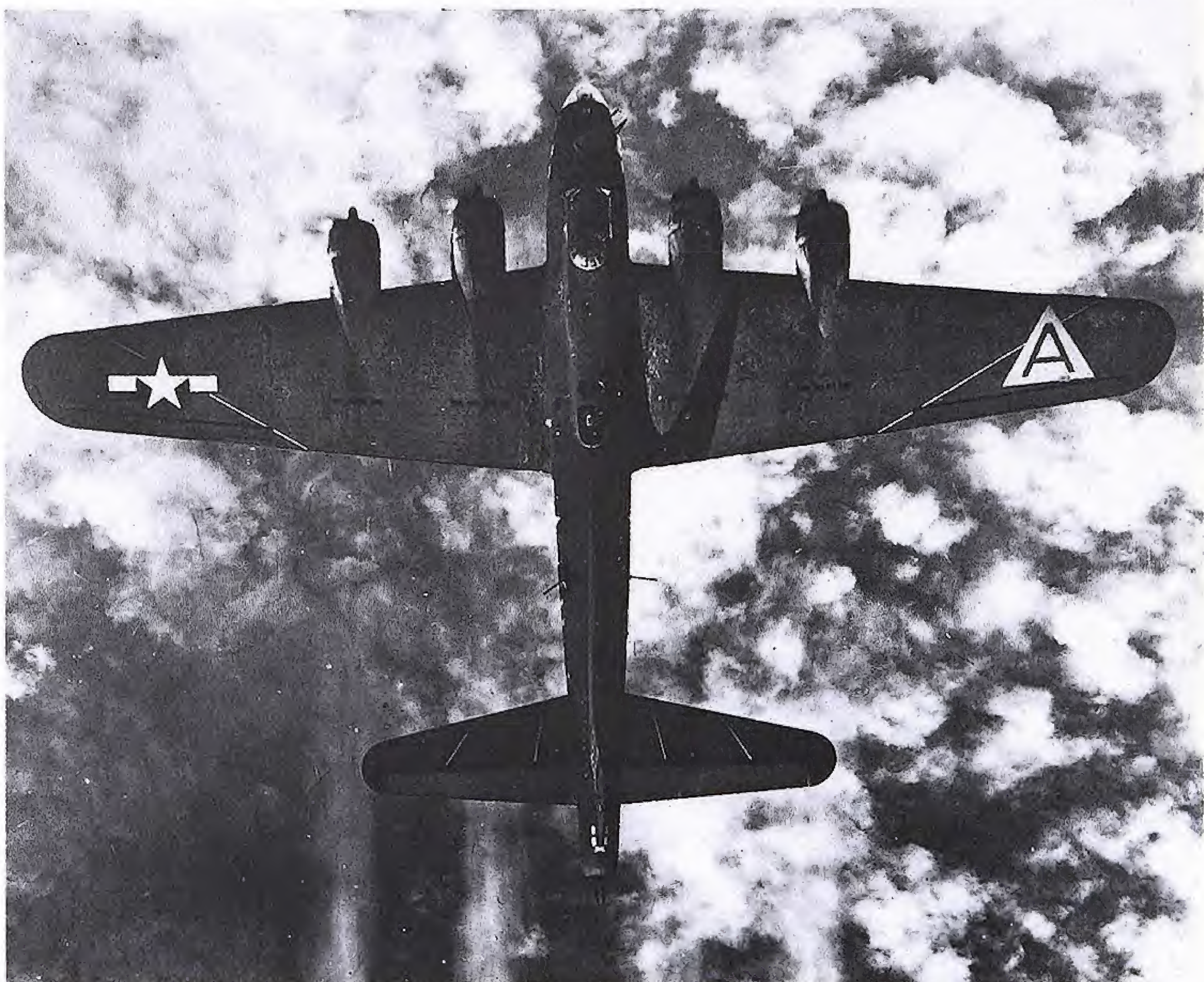
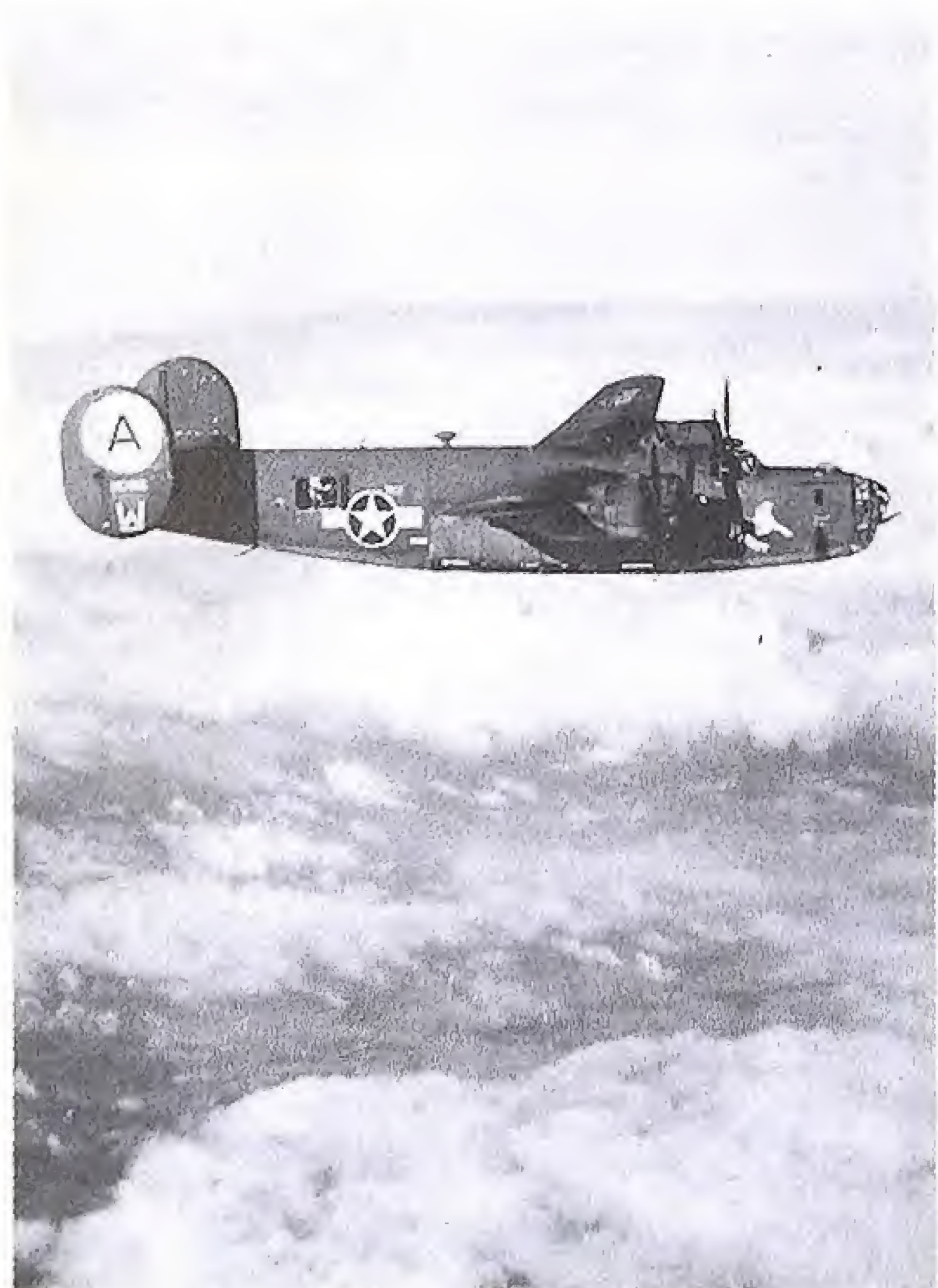
Below: RAF Jaguar with 2 Sqn marking on the intake.

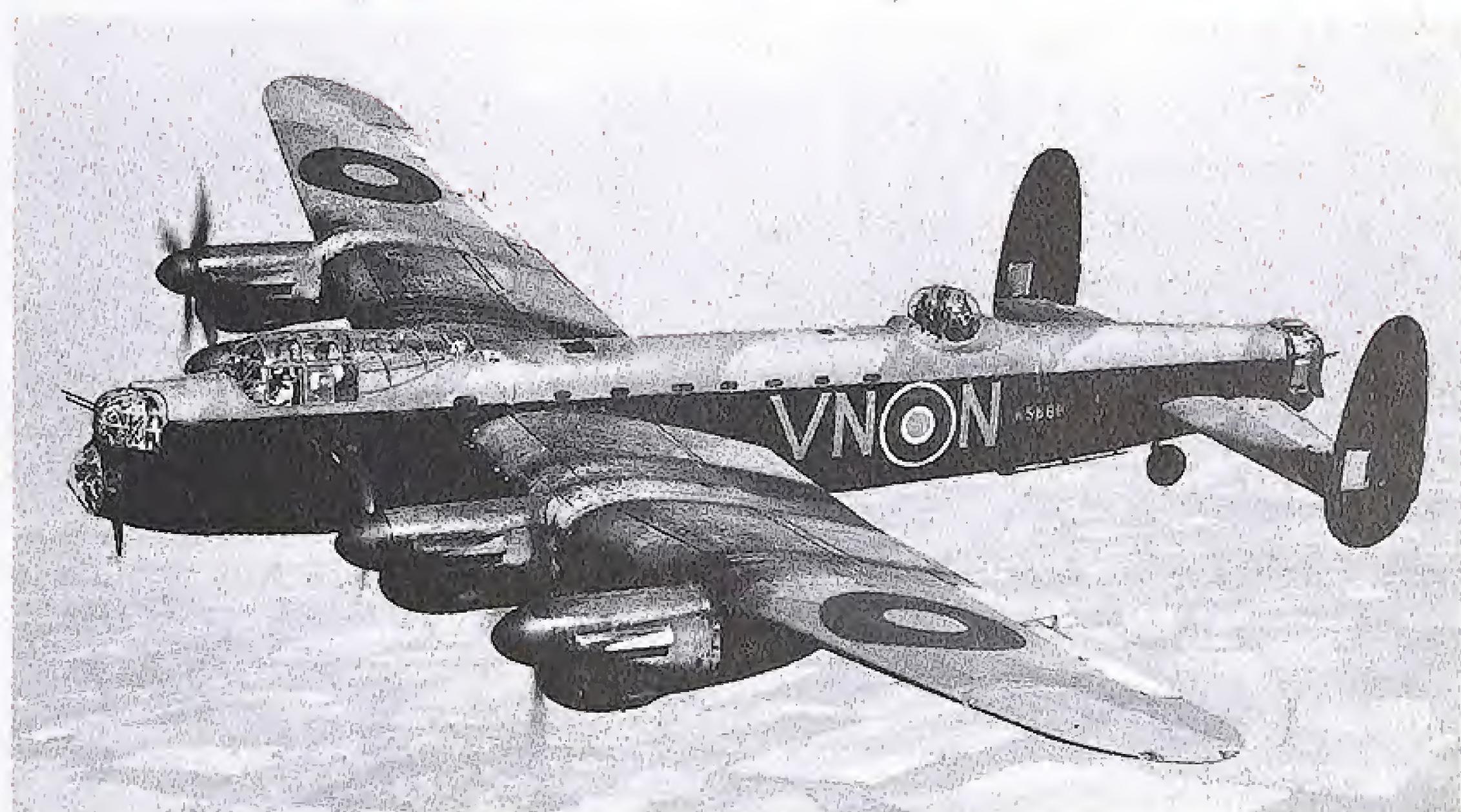
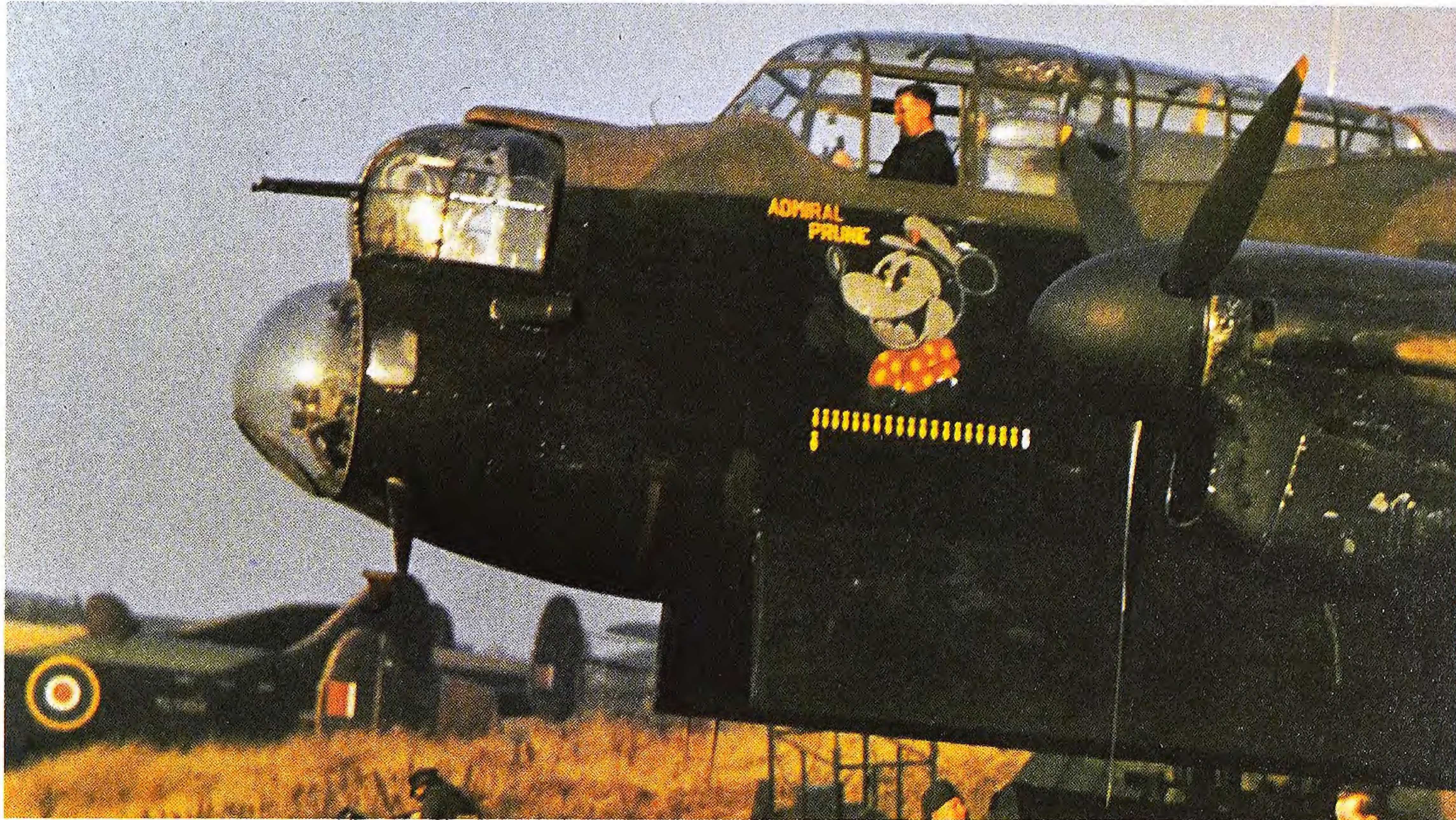




Above: Nose markings, old and new – B-17F; (inset) a KC-10A.

Large codes identified WWII bombers like this 91st BG B-17; Below 8th AF B-24.





Top, above and left: RAF "heavies" – Lancasters and 7 Sqn Stirling.

The V-bombers gave way to the Tornado and the dullness of their appearance is an indication of the need for survival in a world where potential aggressors have large numbers of modern and very capable low-level surface-to-air missiles and radar-directed guns. The bright squadron markings displayed on the fuselages and fins of RAF Tornados in peacetime would very quickly be removed in wartime! Having ended the war with fleets of silver bombers, the United States retained natural metal finish for its Strategic Air Command (SAC) force of new B-47s and B-52s in the 1950s and early 1960s. In 1947, red reappeared in the national marking after its deletion during the war. It was now added as a stripe to each of the white rectangles so that all the colors of the US flag would be represented. This form of insignia was to remain prominently displayed until the Vietnam war prompted a change more in keeping with the dark camouflage which was adopted.

On the silver and gray bombers, SAC and Wing badges were a feature of the time and the large black letters: US AIR FORCE were displayed on the fuselage of the aircraft.

A shrinking Star and Bar

Tactical bombers in SE Asia acquired a three-tone camouflage after initial operations in light gray and soon this Vietnam coloring was to be found on the top surfaces of B-52s engaged in conventional carpet bombing of Viet Cong bases and targets in North Vietnam. For night operations, black was sprayed over the undersurfaces and tails of the aircraft and this finish was also applied to the new F-111 when it was first deployed to SE Asia in 1968. The national insignia began to diminish in size during this period and many markings were deleted altogether in an effort to reduce visibility. However, there was still a need to identify the unit to which an aircraft belonged so those involved in tactical operations like the F-105 and F-4 used a series of two-letter codes which were marked prominently on the fins.

In the 1970s, SAC B-52s were assigned to the low-level nuclear attack role alongside the faster FB-111s and received a disruptive three-color camouflage to reduce the chances of their being spotted by higher-flying enemy fighters. Later trials by SAC

showed that the typical terrain reflectance value for the earth (ignoring desert and snow) is approximately 11 per cent and this became the reflectance target value for a new paint scheme which blended the aircraft outline more effectively into the background. The result was two shades of gray and one of green, low contrast, counter-shaded markings and minimal maintenance instructions over the airframe. At a distance, the current SAC camouflage appears one color, but it is not and trials have proved that it is quite effective over different terrains. Until there is another change, this scheme will remain the current standard for US bombers although radar absorbent paint on the Northrop B-2 and probably the Rockwell B-1B would do more for the combat survival of these types than the visual aspects of the schemes on older aircraft like the B-52 and FB-111.

INTERDICTION

To deny the enemy the use of his rear areas" is the modern definition of interdiction. In an air power context, the word was most widely used when the Royal Air Force chose to insert it into the Canberra designations B(I)6 and B(I)8 in the late 1950s to better describe the particular roles of these two versions. The conventional interdiction task involves low-flying operations, usually by single aircraft, against such targets as supply dumps, assembly points, command centers and airfields. As well as hitting the target, the mission is also intended to spread as much confusion and disruption as possible in areas where attack is least expected.

Some of the earliest "interdiction" sorties could probably be credited to 100 Sqn, Royal Flying Corps, whose FE2b bombers flew missions behind the German lines in the early part of the First World War. The aircraft were painted in black night camouflage, often without national markings. More than 40 years later, Canberras had black as their protective coloring with gray-green camouflage on the upper surfaces and fin, but they were never destined to go to war so their unit markings remained colorfully intact.

In the Second World War intruder operations were conducted by both Allied and Axis Powers with the Luftwaffe achieving some success with individual bombers operating against airfields and factories engaged in war production. He 111s and Ju 88s were the main types used and their finish was much the same as that on the standard bomber aircraft with all the light colors overpainted black. It was only a matter of time before the RAF hit back and with the introduction of the Mosquito into service, the ideal intruder aircraft became available. The Mosquito proved to be an excellent night fighter and early machines started operations in 1942 painted all black, initially in a color known as Special Night finish RDM 2A which later gave way to Smooth Night DTD308 from late in 1942. For the intruder role, aircraft retained the Smooth Night underneath but carried a dark green-medium sea gray camouflage

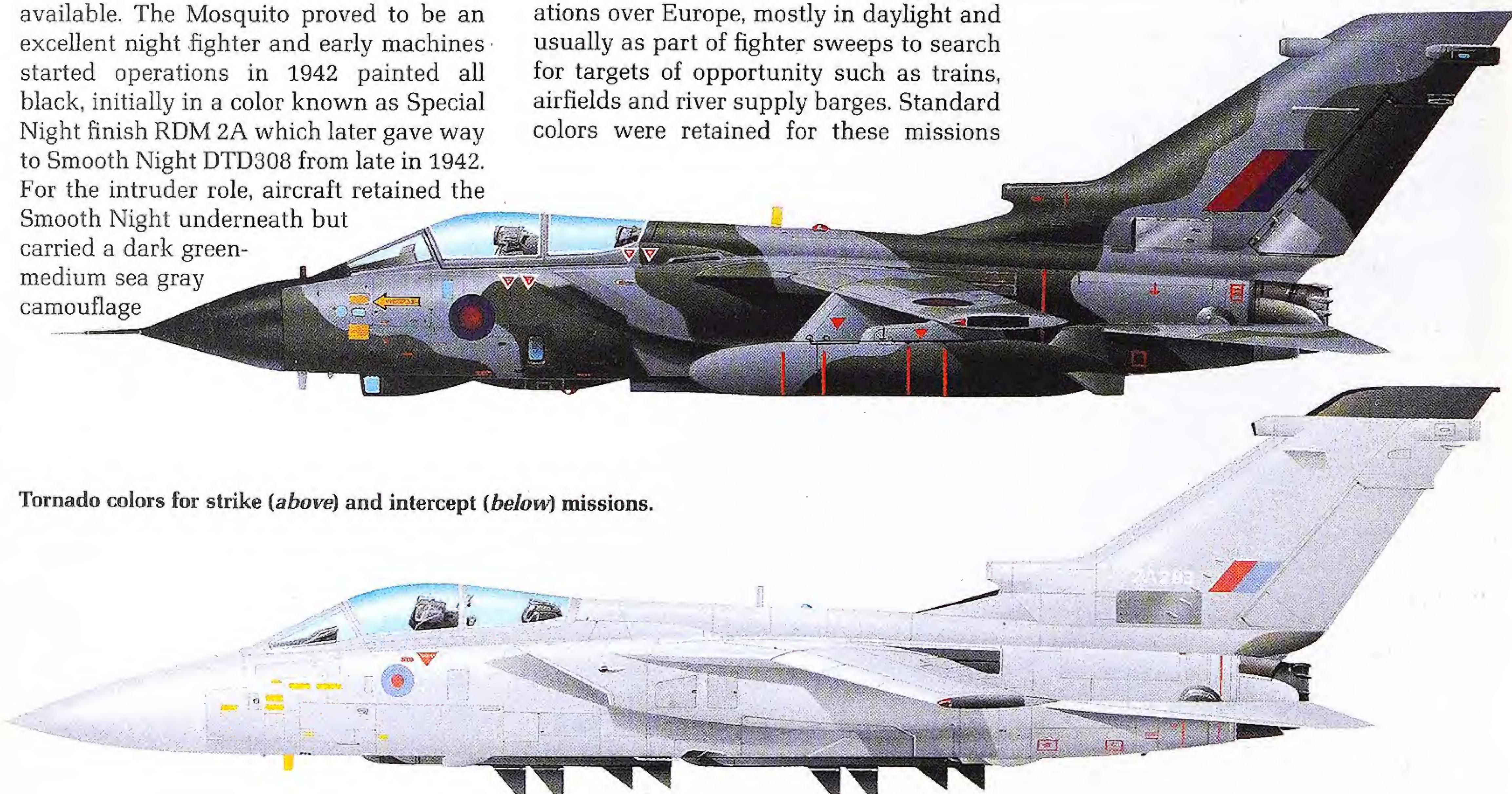


on the top surface with dull red squadron codes on the sides of the fuselage; serial numbers were black.

Towards the end of the war, many Allied aircraft took part in interdiction-type operations over Europe, mostly in daylight and usually as part of fighter sweeps to search for targets of opportunity such as trains, airfields and river supply barges. Standard colors were retained for these missions

Top: RAF Victor – originally a bomber, later an airborne tanker.

Above: USAF F-111, probably the finest all-weather strike aircraft of them all.



Tornado colors for strike (*above*) and intercept (*below*) missions.



1950s bombers still flying – USAF B-52 (top) and Soviet Bear – escorted by USAF F-15.

although individual aircraft were sometimes given “modified” paint schemes to confuse ground gunners and break up the aircraft outline at low level.

After the war, the US Air Force operated the B-26 Invader in the interdiction role, covering the aircraft’s natural finish with overall gloss black (later a dull matt finish) with red serials and “buzz-numbers”, the latter being another form of identification. Aircraft in this form flew missions in Korea and also conducted numerous reconnais-

sance operations over Communist territory. The type was again called up for service during the Vietnam war when modified Invaders, redesignated A-26As, conducted night interdiction missions from Thailand over Laos, Cambodia and North Vietnam in attempts to disrupt the supply routes to the south. Markings were minimal and sometimes were not carried at all, while the

camouflage was the standard SE Asia three-color finish with flat black under surfaces.

Today, the low-level attack role is the one that offers the best chance of survival for aircraft and crew. The F-111, 20 years on from its baptism of fire in Vietnam, still remains one of the few aircraft which is capable of penetrating the sophisticated defenses of an enemy, find the target no matter what the weather is; by day or by night, stand a good chance of hitting it and gain the safety of friendly territory. The majority of the F-111s are currently based in the UK and their colors and markings have remained almost unchanged with the three-tone Vietnam-style camouflage still considered acceptable for the European theater and the black signifying their preferred operational scenario.

MARITIME AIRCRAFT

Camouflaging aircraft for maritime use is as involved as coloring aircraft for overland operations. The essential criteria is to resist as far as possible salt-water corrosion of the vulnerable metal airframes and engines, while at the same time affording some visual protection by giving the aircraft a color scheme in keeping with the surrounding environment. Given that different climatic conditions can produce



a whole range of color shades over the sea ranging from light gray to deep blue and dark green, the problem is one of compromise.

Over the years, naval aircraft have operated in many different color schemes, but experience has shown that gray forms the basis of the most practical over-water camouflage. The neutrality of the color matches the sea and sky in many daylight situations and makes detection quite difficult. Hand-in-hand with the camouflage has come a reduction in size of national markings, a toning down of the colors and the virtual elimination of bright squadron insignia which were once a hallmark of carrier-based naval aircraft.

Few specialized colors were used on marine aircraft in the early days of the First World War, and even by 1918 most types mirrored the coloring and markings applied to land-based machines. One exception was the French Navy which adopted an anchor insignia which is still used today.

The inter-war period required no concealment at sea, with the result that fledgling naval air arms used bright colors to

identify units and adopted their own form of squadron marking. The US Navy and Marine Corps were particularly flamboyant during this period. Like them, the British Fleet Air Arm adopted a silver finish on fabric-covered surfaces with gray paint over the metal parts to prevent corrosion. Land-based coastal reconnaissance aircraft also used a gray and/or silver finish although white was sometimes used on aircraft based in hot climates.

During the Second World War, marine aircraft markings and colors varied according to the nationality. British Fleet Air Arm Swordfish for instance, were initially given dark green and dark earth over the top surfaces with silver, gray or sky on the under surfaces. This changed to dark green and dark gray until, in 1941, a standard scheme of dark slate gray and extra dark sea gray appeared with sky underneath. Later in the war, white replaced the sky color and was adopted for RAF Coastal Command aircraft such as Liberators, Whitleys and Fortresses with the Temperate Sea Scheme over the top surfaces.

While directive followed directive con-

1943 RAF Bomber Command Mosquitos, 139 Sqn.

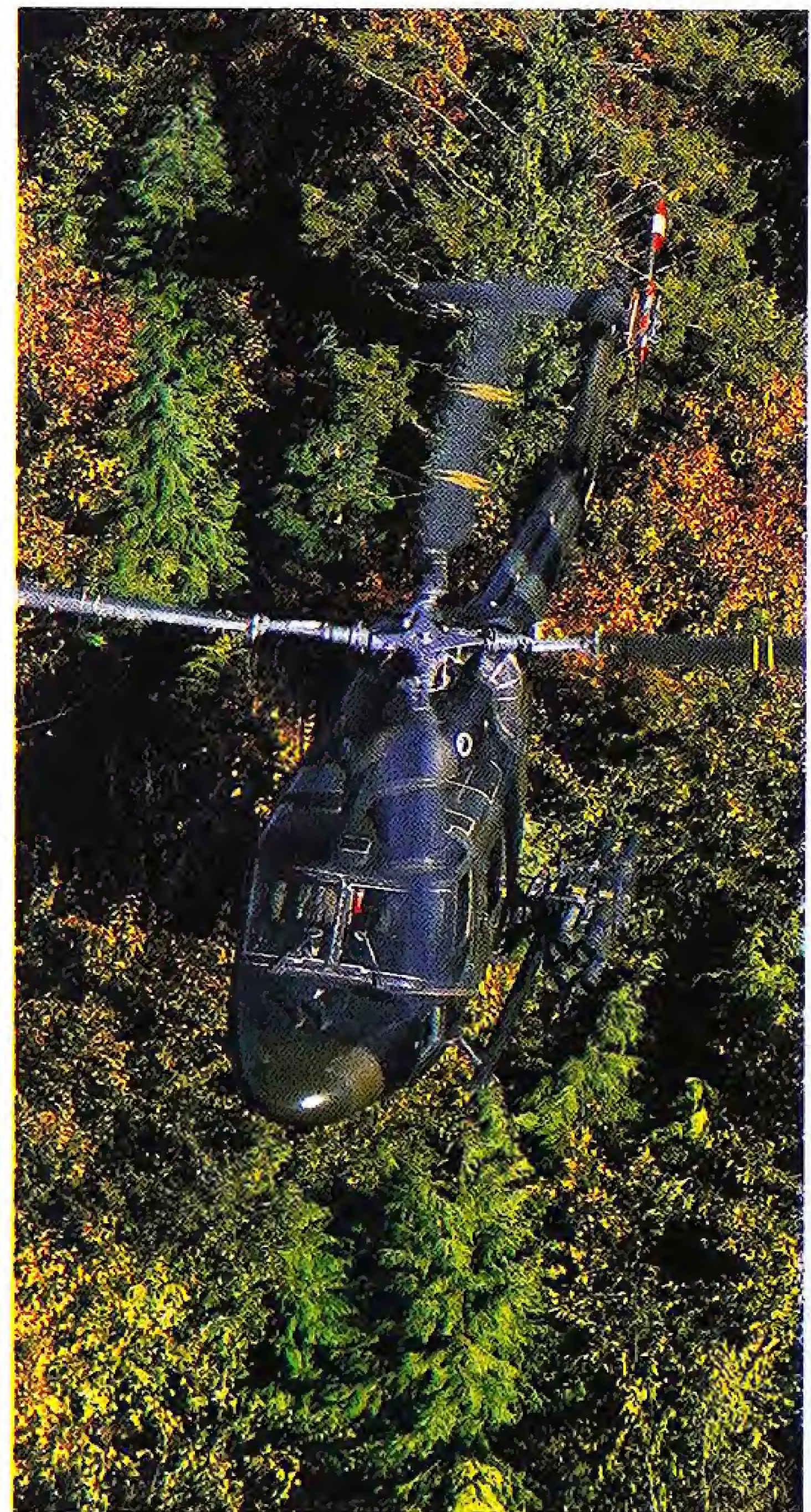
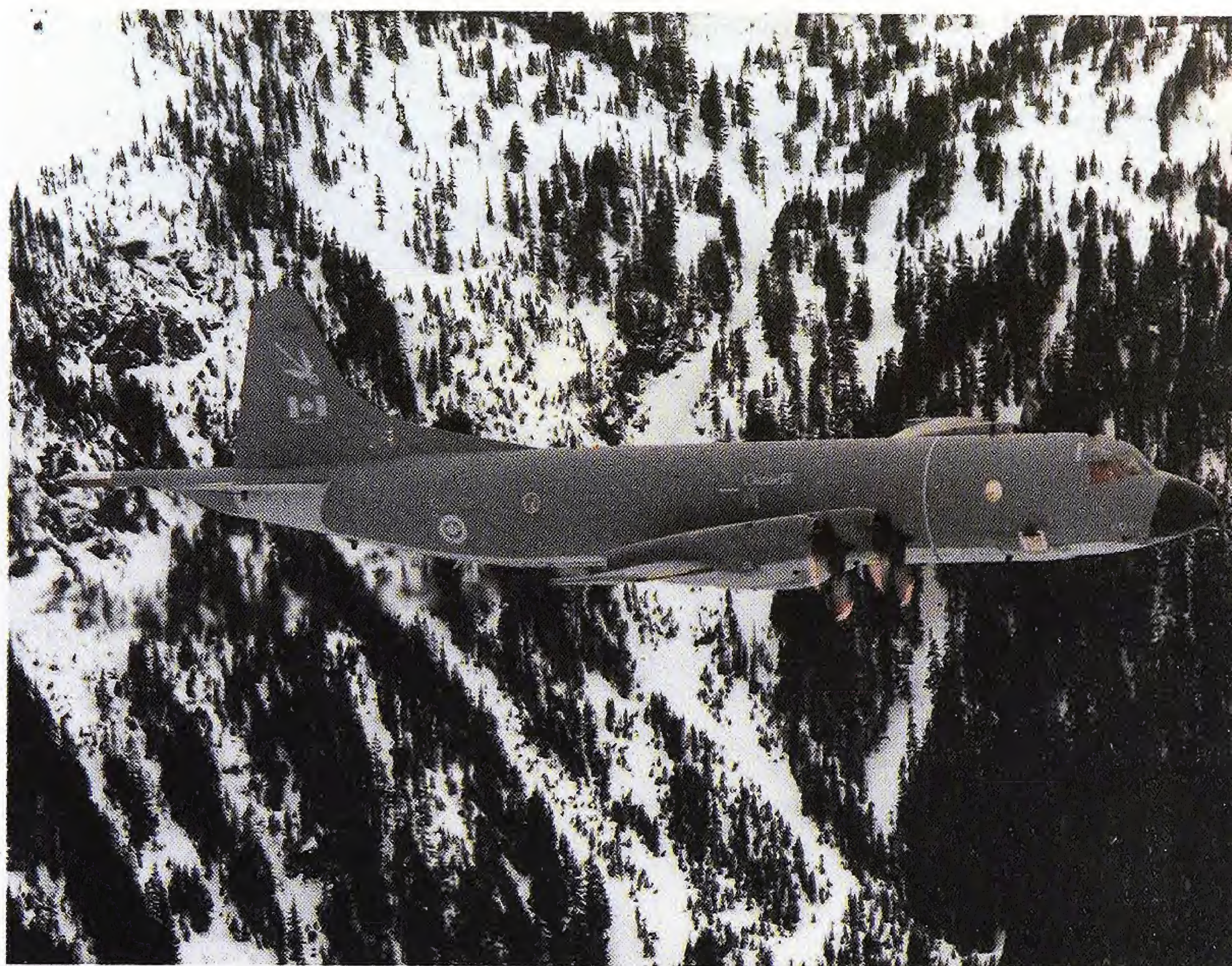
cerning the markings on British aircraft, the Luftwaffe's patrol flying-boats employed the standard two-green splinter camouflage of the non-maritime units. Variations on this included Bv 138 three-engined flying boats used for U-boat resupply in northern waters being given crude applications of washable white paint to better merge with the ice floes. This was also used on Heinkel He 115 float-planes. Further south in the Mediterranean, anti-shipping Ju 88s were given a scheme known as *Wellenmuster* (wave pattern) using RLM Grau or *Hellblau* sprayed in a snake-like pattern over the upper surfaces, often with matt black underneath indicating a night role rather than a daylight one.

Neutrality Gray became the mandatory color scheme on all US Navy aircraft from February 1941 and the markings were changed to suit the scheme. Then, in 1942, a three-blue camouflage was adopted followed two years later by an overall dark blue – all these colors having a matt or dull finish. As with land planes of this period, red was deleted from all national markings (including those insignia of the Commonwealth air forces); it returned some two years after the end of the Japanese war. Dark blue remained in use until after the Korean War when a matt gull gray and glossy white scheme was introduced as it was felt to be more suitable for high altitude operations.

For many years, the main upper surface color of maritime patrol aircraft such as the British Aerospace Nimrod and the Lockheed Orion was white. This was intended to reduce the effect of solar heating in the cabin, but was obviously a poor over-water color making the aircraft particularly con-



Belgian Air Force Sea King of 40 Sqn used for SAR duties.



Top: Gray over-water colors on a Canadian Aurora and USN Viking (*above*).
Left: A Lynx merging well against trees.

spicuous against most sea backgrounds. However, experiments using darker colors such as Hemp (a sort of light brown) on the Nimrods and a medium gray on the Orions showed no significant rise in internal temperatures. An additional factor with the Orion scheme was that the popular Patrol Squadron tail markings had to be deleted so as not to compromise the camouflage (it was also directed that for security purposes the markings would have to come off anyway – another move towards a less

interesting future with a definite gray bias). The Hemp scheme on the Nimrod was initially chosen to increase the aircraft's concealment when it was sited on airfield hard standings and although not ideal for an over-water camouflage, it has been found to be adequate and certainly better than white! To show that things sometimes go wrong, even with professional operations, the original Hemp color specification for a trial application was changed by mistake and the aircraft was rolled out in a particularly unpleasant shade of dark brown. Never a service to miss a trick, the RAF resourcefully wrote across the hangar door "Coconut Airways". Worse followed. When the aircraft returned from detachment to another airfield, the fin was ador-

ned with an appropriate red dayglo emblem and underneath it ... "Elsan Airways".

In the murky conditions of the South Atlantic in 1982, the Sea Harrier won its battle honors and it is no exaggeration to say that the gray camouflage in which the aircraft went to war helped considerably in keeping the losses to a minimum. The early aircraft were given a makeshift scheme of dark gray to transform them from their previous peacetime blue and white markings. However, the pilots felt a lighter shade was required and this was done and prompted Argentine pilots to later state that while they could see the dark Harriers, they could not see the light gray ones! This was a further vindication of this very neutral color.

Maritime aircraft markings have almost universally "gone small" with most of the color concentrated down to one shade. Even badges are generally carried in out-



RAF Nimrods in the original white scheme (top) and the latest Hemp (above).

line only. Only with the lessening of international tension will the colors return, but dull matt gray is definitely the keynote color for modern combat aircraft.

SPECIAL MARKINGS

A special marking can take the form of any indicator showing the aircraft has a particular purpose or role, or is fitted with equipment that is different from its normal "fit". Some of the most obvious special markings are carried by the aircraft flown by the national aerobatic teams such as the American Thunderbirds, British Red Arrows and the Italian *Frecce Tricolori*. The brightly-colored finishes are unique to each team and its aircraft, which are, in most cases normal combat or trainer aircraft. Temporary color schemes are regularly employed by air forces on detachment, a good example being the RAF Jaguars and Harriers which deploy to Norway as part of their NATO commitment. Against the winter background of snow and ice, dark camouflage schemes would stand out so the aircraft are given a random covering of

white distemper to blend them against the background during low-level operations; the white soon washes off to restore them to the standard coloring.

Colored bands have often been employed to indicate a special role, one of the longest-serving examples being the black and yellow stripes used on the undersides of target tugs (as the crews put it – to show that we

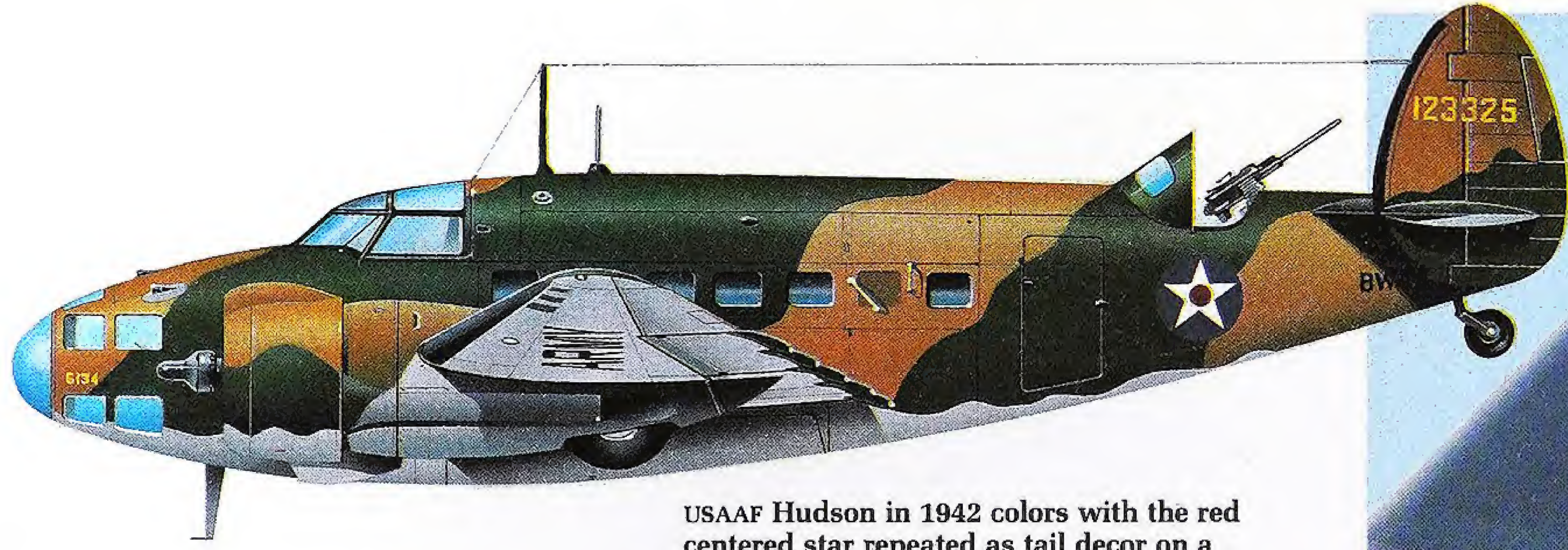
are pulling the target, not pushing it!). Earlier examples include the black and white bands carried by Allied aircraft for D-Day in 1944 and the black and yellow stripes used in 1956 for the Suez operation. Throughout, yellow was extensively used for training aircraft. Aircraft also receive special markings to alert other aircraft as to their nationality or to be seen more easily. A wartime example was the signal by 8th Fighter Command, USAAF, to the P-47 Thunderbolt Groups based in the UK in 1943, ordering that due to misidentification of the aircraft for German Focke-Wulf Fw 190s, they were to be painted with white noses and white stripes across the wings, and tail units; a similar recognition problem existed with the Typhoon and Fw 190, prompting the application of black stripes under the wings of the British aircraft. More recently, in 1989, a spate of low-flying accidents in West Germany resulted in the painting of all white fins and rudders on RAF German-based Tornados and Harriers to help pilots see each other during tactical exercises.

Deception also produces unusual markings, sometimes covering a number of aircraft, often only a single machine. An RAF Hurricane in the Western Desert campaign was noted carrying random blotches of dark paint along the leading edges of the wing and nose, presumably to induce a vital hesitation among enemy ground forces who might think the aircraft was friendly as the scheme closely matched that used on some Italian single seat, single-engined fighters! A current innovative marking designed to deceive is the false cockpit canopy painted under the noses of Canadian Armed Forces Hornet fighters. This has proved its worth in air-to-air combat exercises when for a split second the "enemy" has lost his perception of exactly which way up his adversary is flying – and lost the contest.

Mention should also be made of the lighter side of military aircraft marking, such as the tiger stripes of black and yellow which have traditionally been applied to a group of combat types (and helicopters) of units which have a tiger somewhere in their



National flag marking on an RAF Chinook.



USAAF Hudson in 1942 colors with the red centered star repeated as tail decor on a KC-10A tanker.



badges. Hours of painstaking work have gone into some of these schemes, always with the proviso that the aircraft can be returned to front-line service in its original colors within a very short time should the need arise. Squadron or national anniversaries have also prompted many garish markings, often with the whole aircraft receiving treatment, and of course, worthy causes have seen some machines don a more flippant approach to special markings such as the RAF Shackletons with red noses for the Children in Need Comic Relief Day; presumably the crews also joined in!

Less obvious markings can also denote a special purpose such as the long-standing UK practice of painting a letter P in a circle on prototype designs; the wartime directive that serial numbers on the sides of aircraft carrying special equipment or those still secret should have a G suffix indicating the aircraft required a guard while it was on the ground. Examples exist in almost every area of aviation and as long as there are military aircraft extant, special markings will continue to be applied, for whatever reason!



Above: Tiger-striped Sea King. Below: An all-black TR-1.



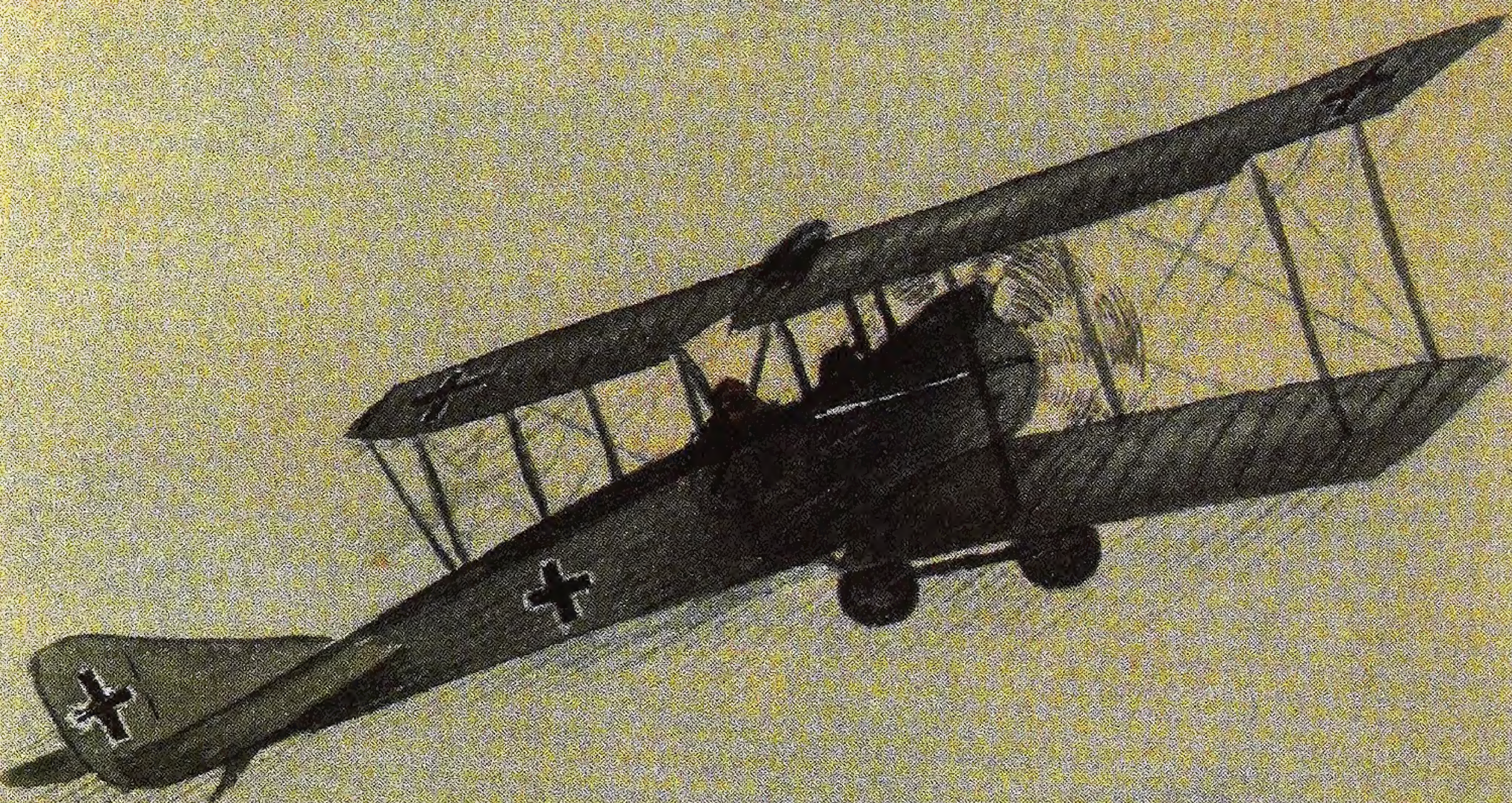


World War One and After

1914-1935

ALBATROS DV	27
AVRO 504	24
BOEING P-26	34
BRISTOL BULLDOG	30
FOKKER Dr 1	28
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HAWKER FURY	32
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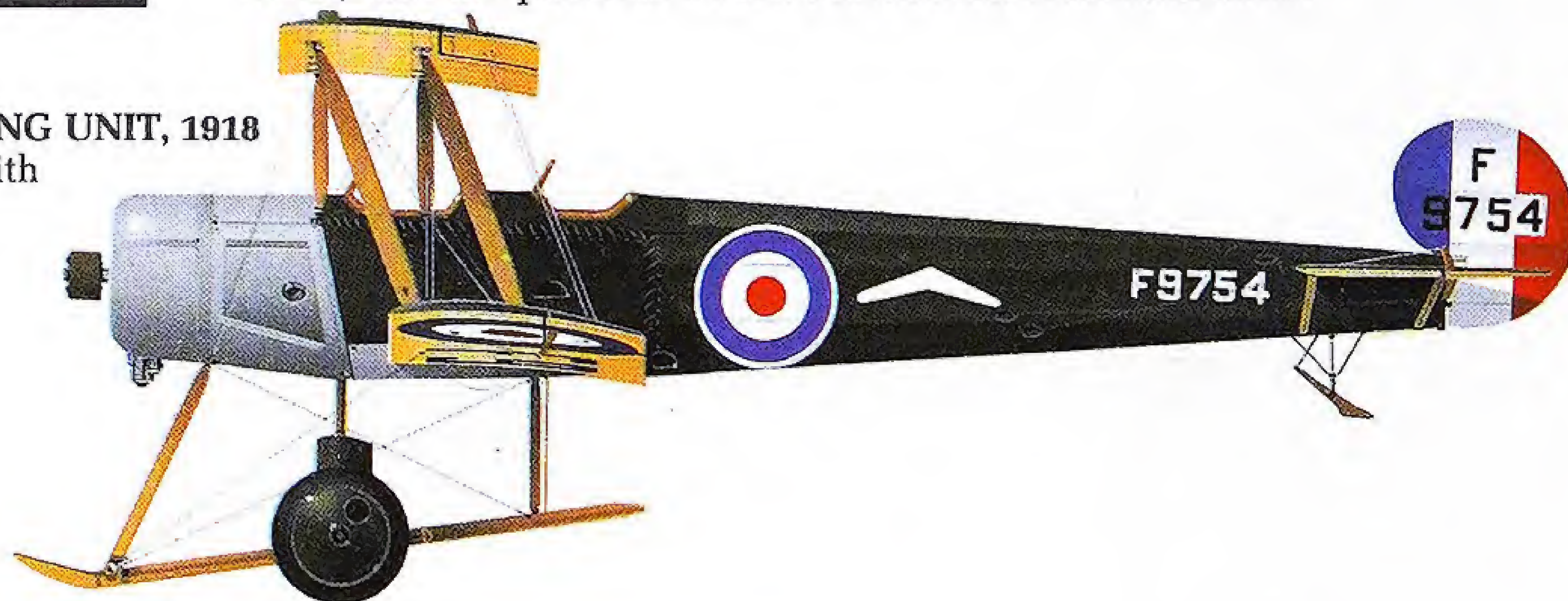


AVRO 504

One of the most famous biplane trainers, the Avro 504 first appeared in 1913 and in the opening stages of World War I operated in bombing and reconnaissance roles with the Royal Flying Corps and the Royal Naval Air Service. However, from 1915 the Avro was assigned the training task for which this aircraft was ideally suited: its docile handling quality endeared it to all who flew it. The main variants were the 504J, 504K, and the postwar 504N. Production exceeded 8600.

504K, ROYAL FLYING CORPS TRAINING UNIT, 1918

This aircraft has a khaki-green finish with clear-doped undersurfaces.



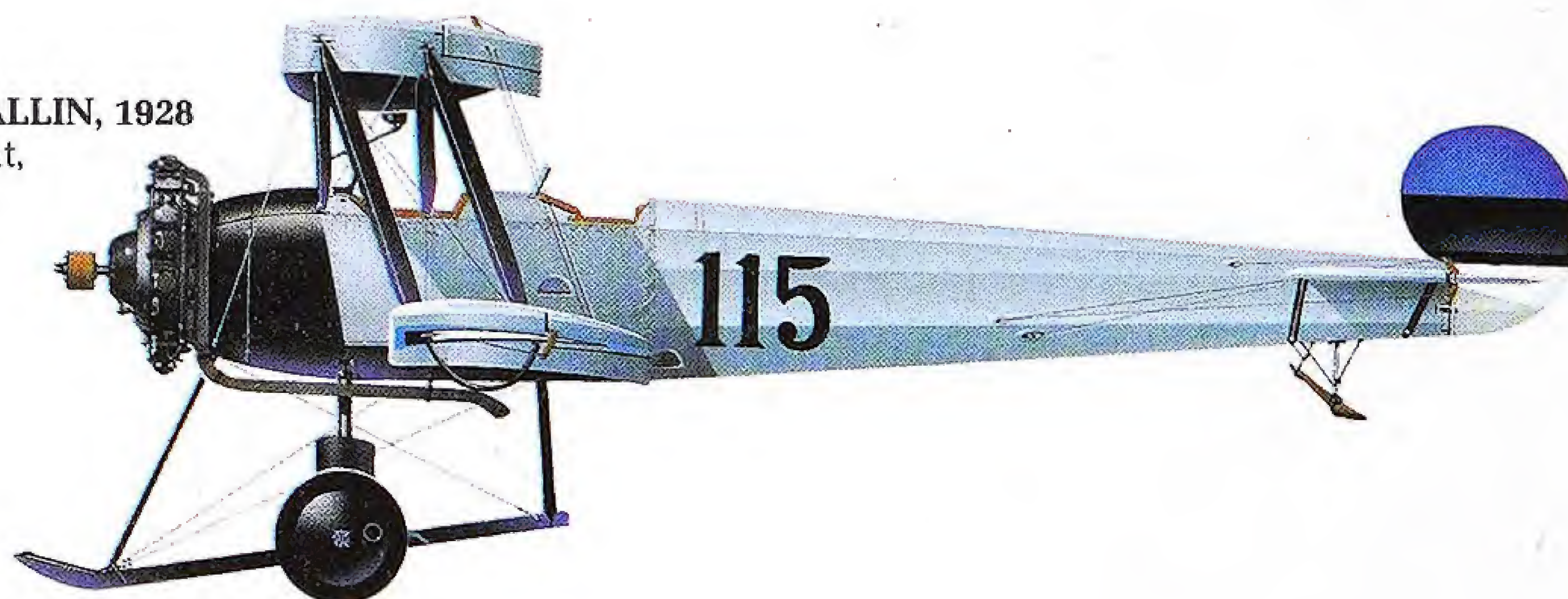
504K, No 8 TRAINING SQUADRON, RFC/RAF, 1918

A clear-doped finish with unit marking and aluminum nose cowling distinguish this aircraft. The small D prefix indicates an Avro-built machine.



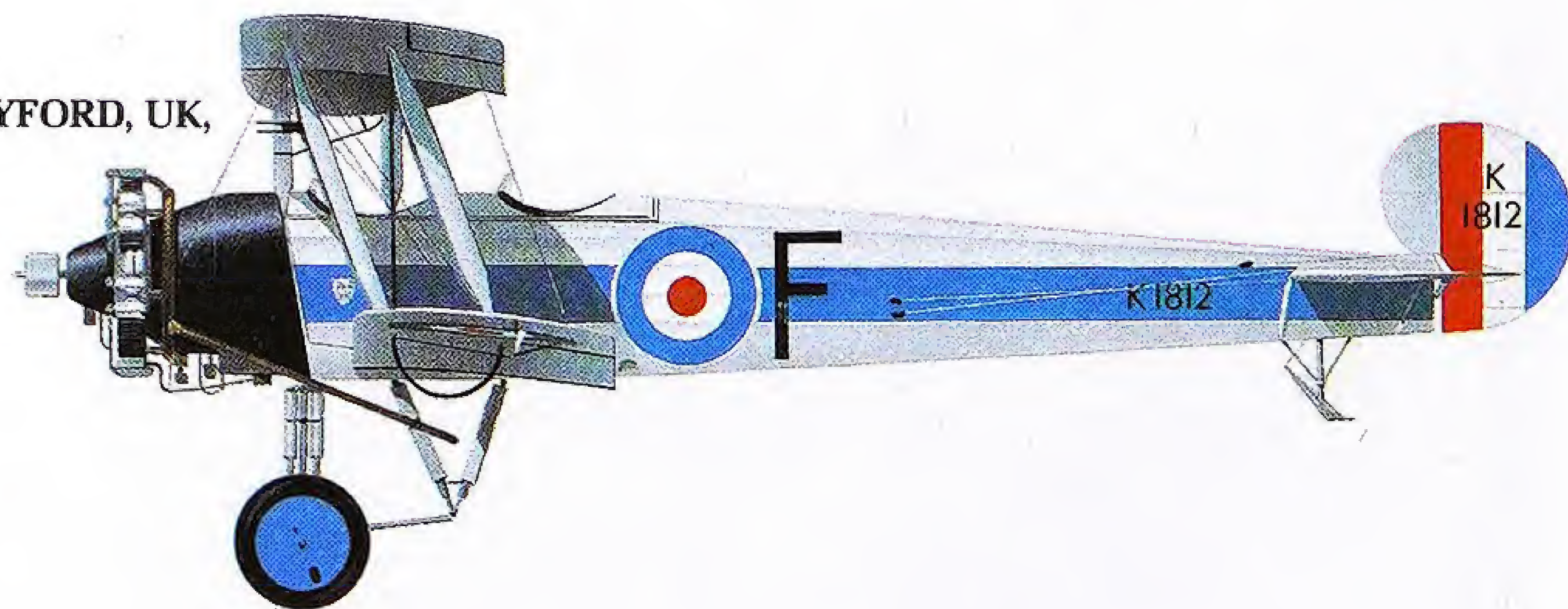
504R, ESTONIAN AIR FORCE, TALLIN, 1928

Only a small number of this variant, known as the Gosport, were built.



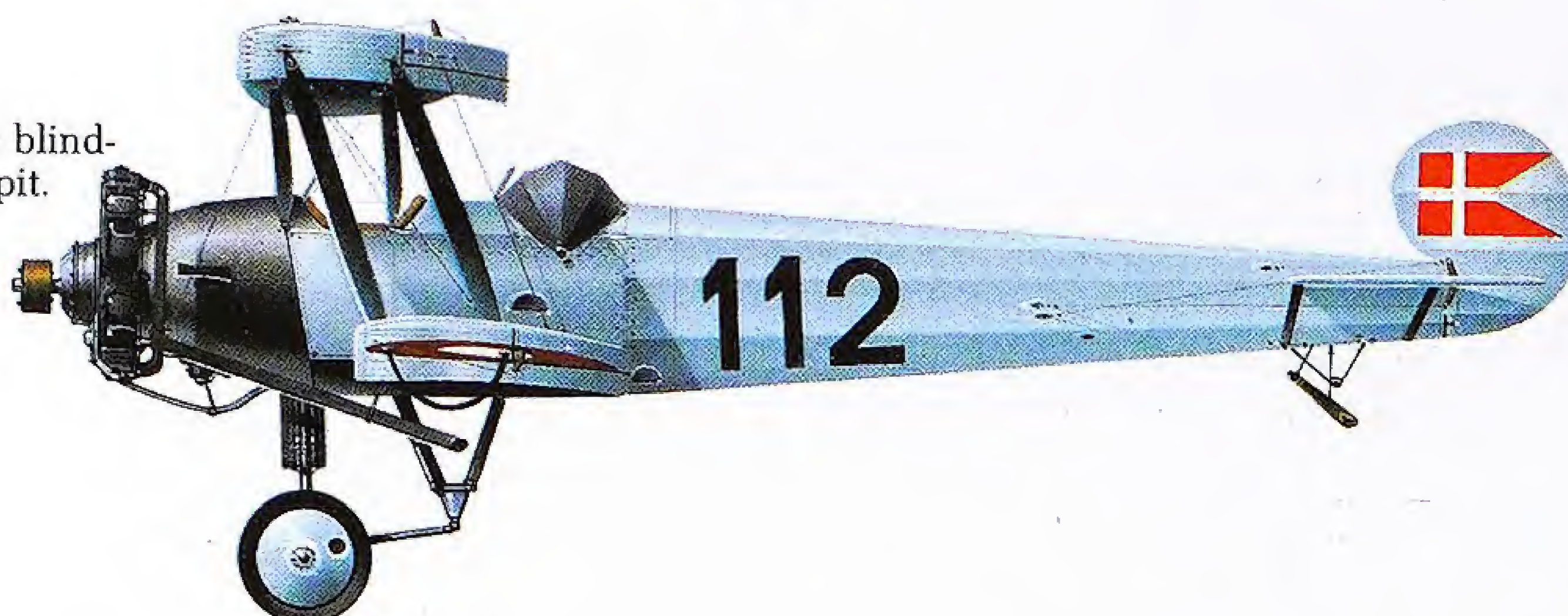
504N, OXFORD UNIVERSITY AIR SQUADRON, UPPER HEYFORD, UK, MID-1930s

This was widely used by RAF flying-training schools between the wars. It also saw service with the Cambridge University Air Squadron.



504N, DANISH NAVY, 1927

A converted 504K, it is shown with a blind-flying hood closed over the rear cockpit.

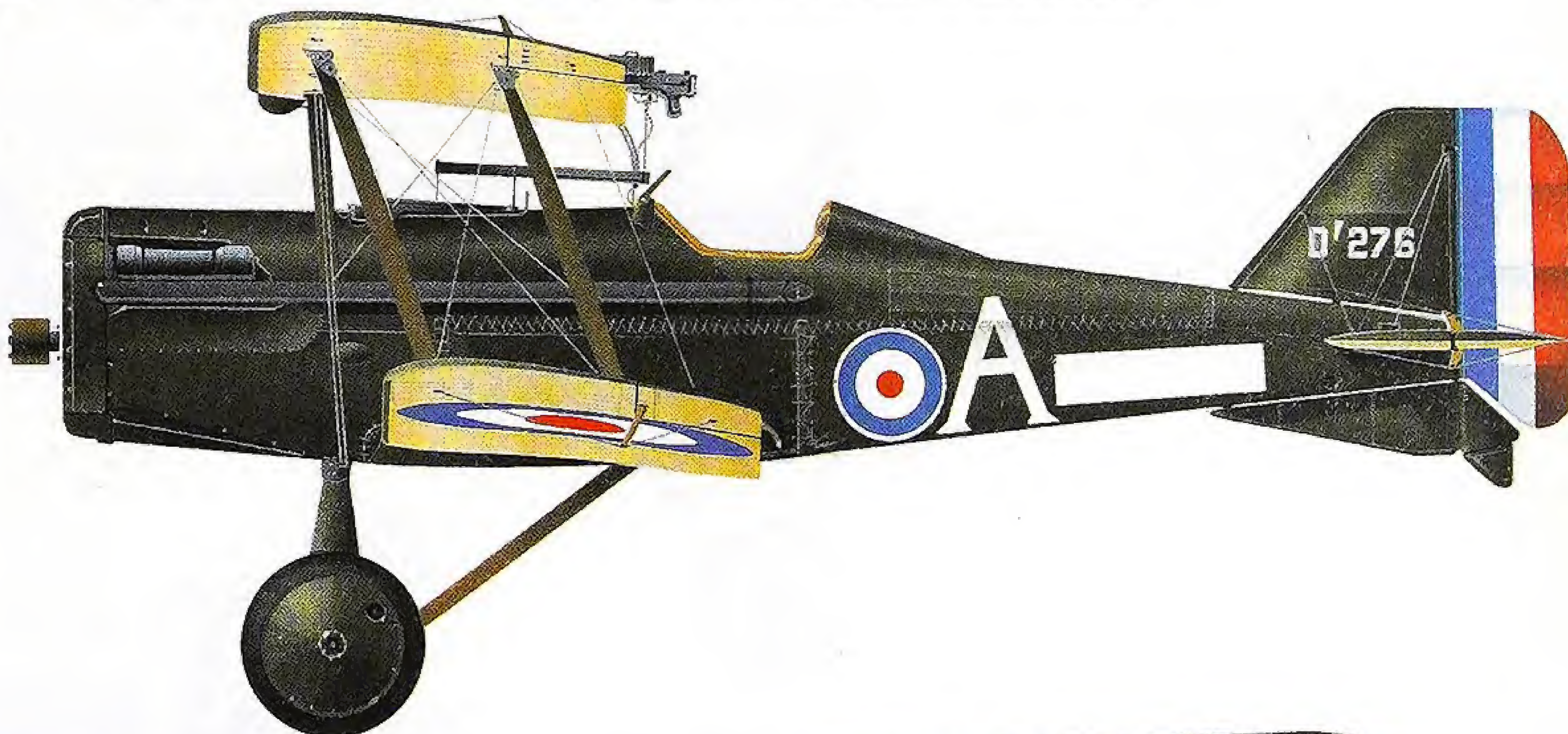


S.E.5a

One of the outstanding single-seat fighters or scouts of World War I, the S.E.5 was designed by the Royal Aircraft Factory at Farnborough and was superior in most respects to its enemy contemporaries. Armament was a single Vickers gun in the fuselage and a Lewis gun above the wing. The type entered service with 56 Squadron in France in April 1917. Unreliability forced a switch from the 200-hp Hispano-Suiza engine to the 200-hp Wolseley Viper. Production totalled 5205.

74 SQUADRON, RAF, 1918

Major 'Mick' Mannock claimed some of his 73 victories flying this type shortly after the RAF was formed by the amalgamation of the RFC and the RNAS. Note the large identification letter 'A' on the fuselage. This 'A' code was also painted large on the upper starboard wing.



Head-on view showing the wire rigging between the wings. The underwing roundels were 59in in diameter, applied over clear-doped fabric which resulted in a buff color.

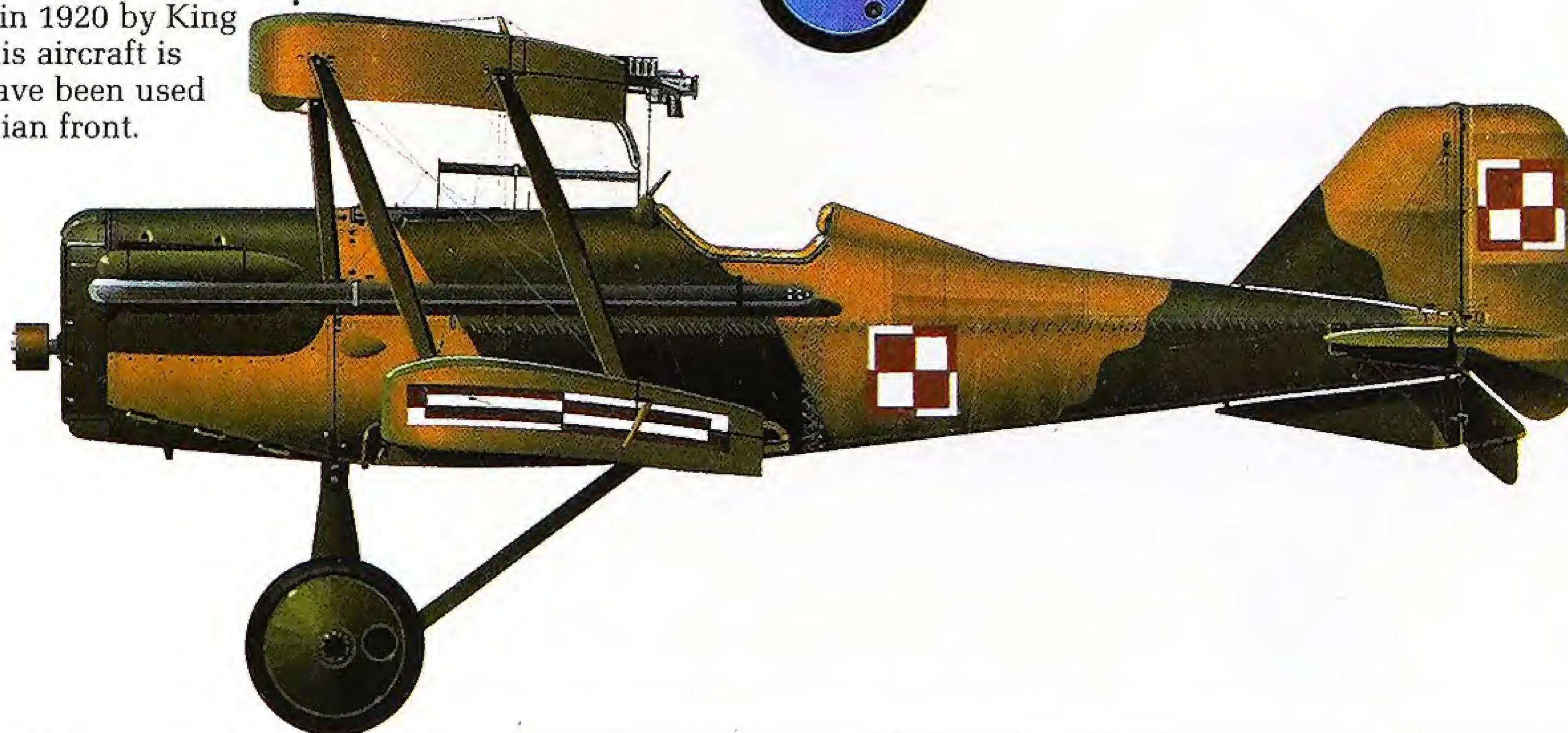
25th AERO SQUADRON, US AIR SERVICE, LANGLEY FIELD, US, 1919

This aircraft has retained the official PC10 or khaki top surface color, clear-doped undersides and rudder striping. Wartime roundels were officially replaced by the star insignia in May 1919.



POLISH AIR CORPS, 1920

One of the several S.E.5a fighters presented to Poland early in 1920 by King George V. This aircraft is believed to have been used on the Ukrainian front.



SOPWITH CAMEL

Invariably linked with air stories of World War I, the Sopwith Camel was a tricky and temperamental little fighter for a novice pilot, but in maneuverability it had no equal and overcame its lack of speed with this vital asset. Armament usually comprised twin Vickers guns with provision, on naval versions, for a Lewis gun above the wing to replace one of the Vickers. The Camel entered service in July 1917 and 32 squadrons had the type by the end of the war. Production totalled 5490.

**A FLIGHT, 10 (NAVAL) SQUADRON,
ROYAL NAVAL AIR SERVICE,
TREIZENNES, BELGIUM, 1917**
The khaki-green camouflage is almost
totally compromised by Canadian
William Alexander's personal markings.



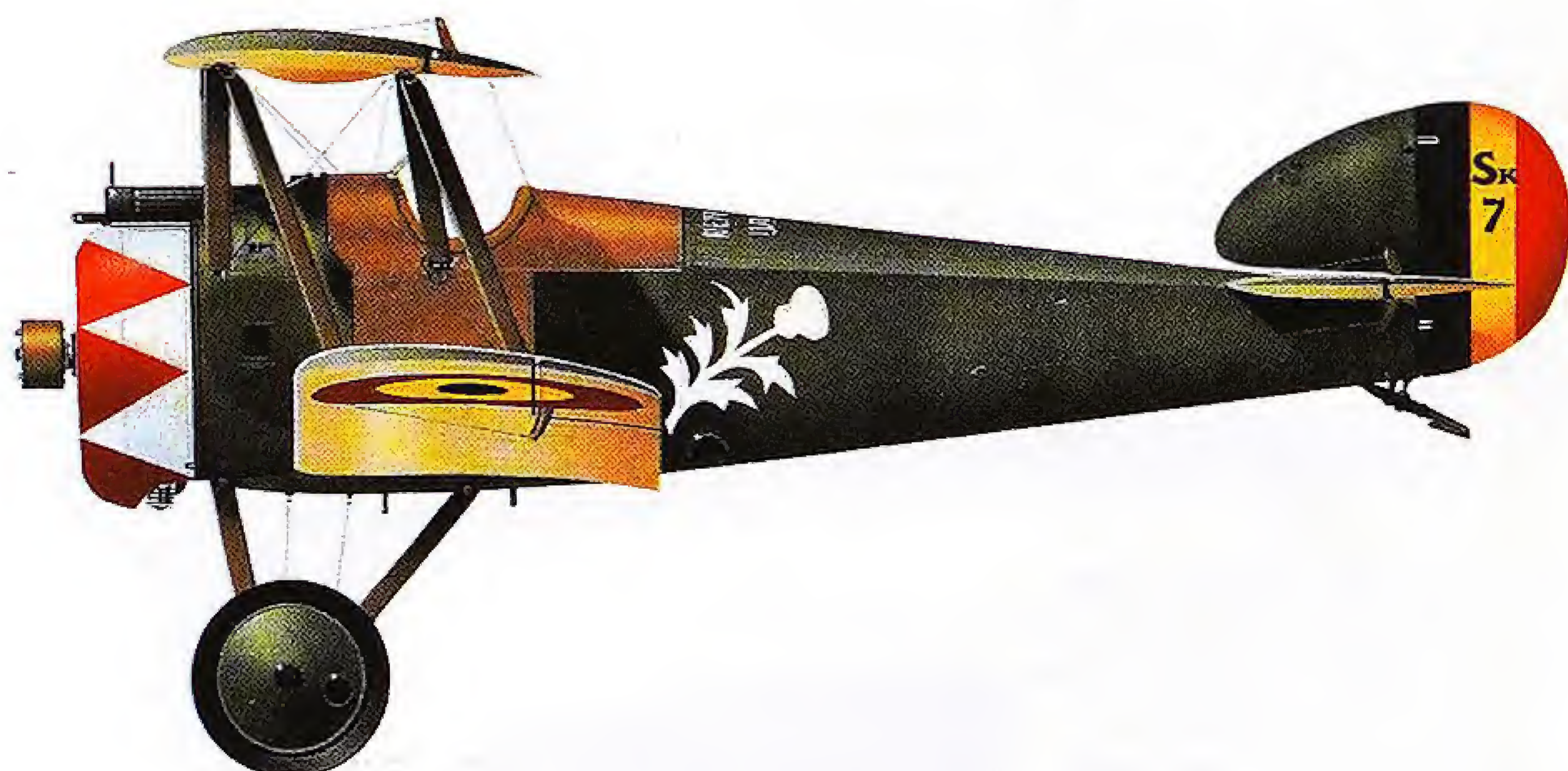
65 SQUADRON, ROYAL FLYING CORPS, 1917
This Camel (F6314) still survives and can be
seen in the RAF Museum, Hendon. Colors and
markings are typical. Note the polished
aluminum cowling.



PERSONAL COLORS, 1919
Just after the war, in 1919, a Capt C. M.
McEwen flew this Boulton & Paul-built
Camel while based in Italy. The serial
had been wrongly marked – it
should be D8239.



GROUPE DE CHASSE BELGE, BELGIAN AIR SERVICE, 1918
A Camel in Belgian markings with what
appears to be polished wood around the
cockpit area. The pilot was the Belgian ace,
Jan Oleislagen, and the plane sports a resplendent
thistle insignia just aft of the cockpit.



**F1 CAMEL, POSSIBLY SLAVO-BRITISH
AVIATION GROUP, 1919**
Apart from the leaping bear marking,
this machine is quite anonymous
although it has evidence of
previous RFC/RAF ownership
on the rudder and fuselage side.
It is believed to have been one of a
number used against the Russians
in 1919–20.



ALBATROS DV

Originally designed by the Albatros company in an attempt to contain the ascendancy of the growing numbers of Allied fighters arriving at the Front in the spring of 1917. The D.V, however, was not a success. Little better than its D-III predecessor, the new aircraft suffered from structural weakness of the lower wing and accidents as well as enemy action befell, what was aesthetically, a very streamlined design. With well over 1000 serving on the Western Front in May 1918, production probably exceeded 3000 by the end of World War I.

D.V, JASTA 5, IMPERIAL AIR SERVICE, WESTERN FRONT, 1917

Jastaführer Oberleutnant Paul Bäumer flew this Edelweiss-decorated machine on the Western Front in late 1917.

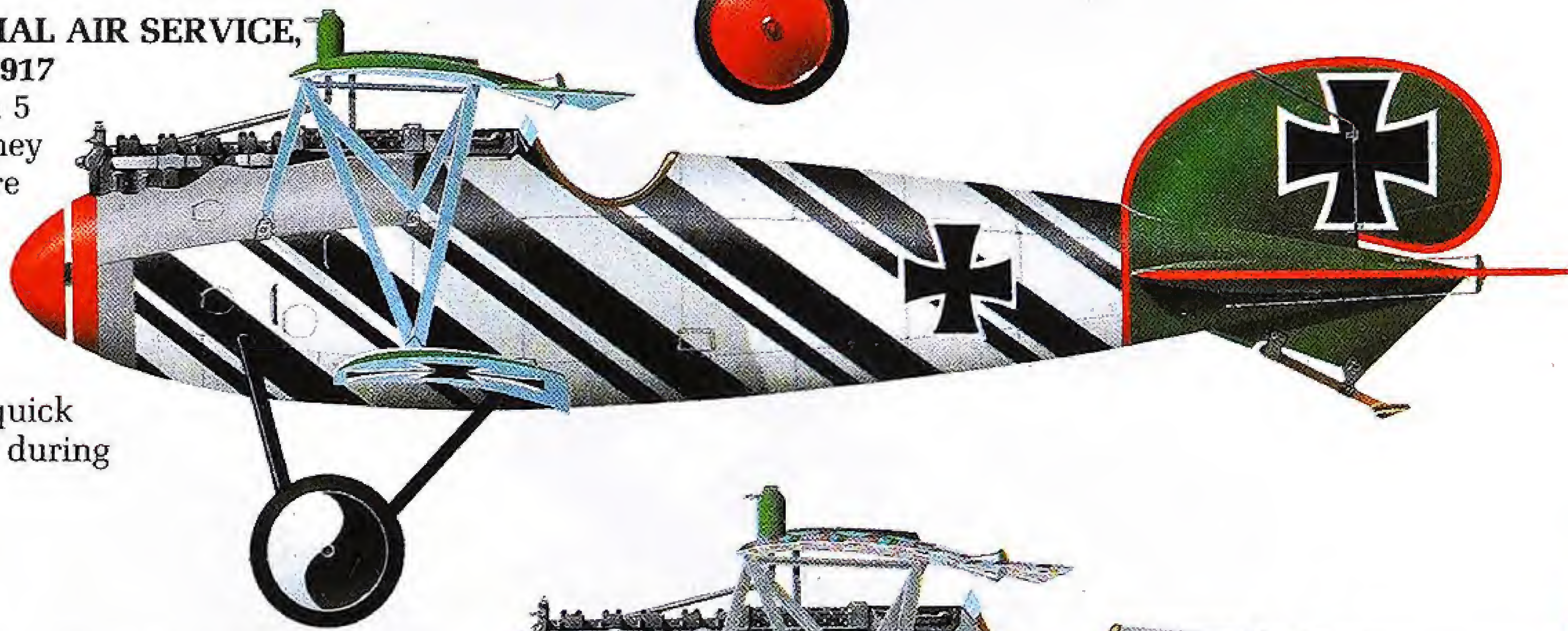
Jasta 5 decorated the tails of its machines in dark green outlined in red, the fuselage colors were created by the individual pilots.



D.V, JASTA 5, IMPERIAL AIR SERVICE, WESTERN FRONT, 1917

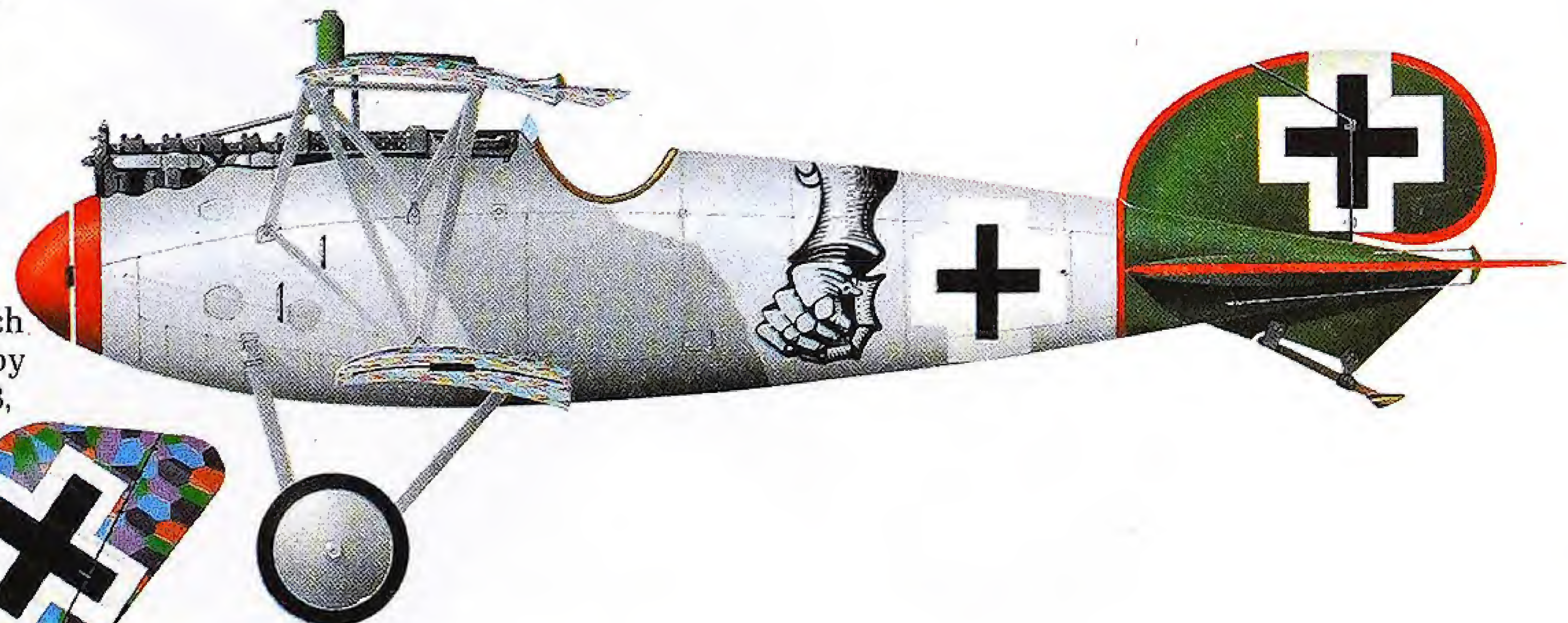
A member of the Jasta 5 'Circus', Lttn Fritz Rumey claimed 45 'kills' before losing his life on 27 September 1918.

As well as decoration on the aircraft, such bright colouring provided a quick form of 'identification' during dogfights.



D.V, JASTA 5, ATTACHED TO SECOND ARMY, IMPERIAL AIR SERVICE, WESTERN FRONT, 1918

Oberleutnant R Flashar painted an iron fist on each side of his aircraft. The cross patée was replaced by the straight-edged Latin cross from 1 January 1918, the white edging varying in thickness between aircraft.



Upper surfaces of Obltn Flashar's D.V showing the hexagon-printed camouflage which was printed on the fabric before attachment to the airframe. The colors were dark green, light green, fawn and mauve, with violet, gray and blue-gray sometimes included. The white bars were an additional identification marking.



The upper wing surface illustrations show the two- and three-segment camouflage using green and mauve or dark purple. Light blue was the usual undersurface colour.



D.V, JASTA 5, IMPERIAL AIR SERVICE, WESTERN FRONT, 1917

A very dense blue and white pattern was applied by an unidentified pilot who also masked an area of the gray painted fuselage and included a stylised Bavarian lion motif on each side. Projecting above the wing is part of the radiator, offset to starboard to prevent scalding water pouring over the pilot in the event of damage in combat.

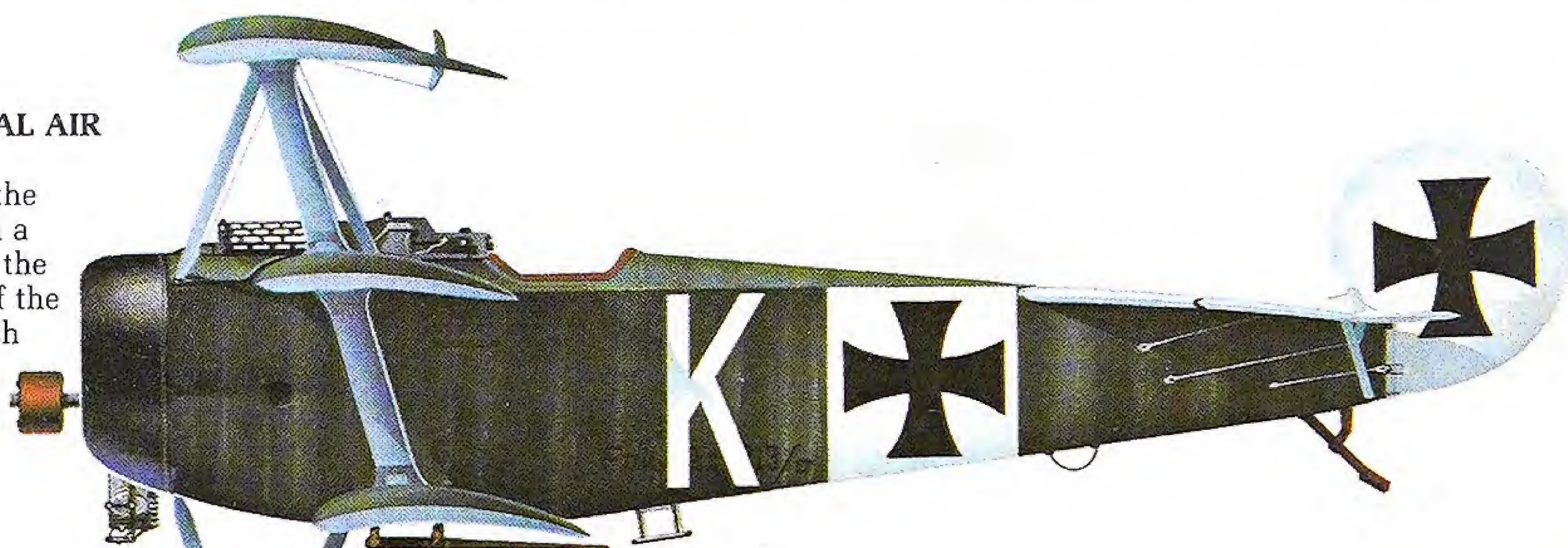


FOKKER Dr 1

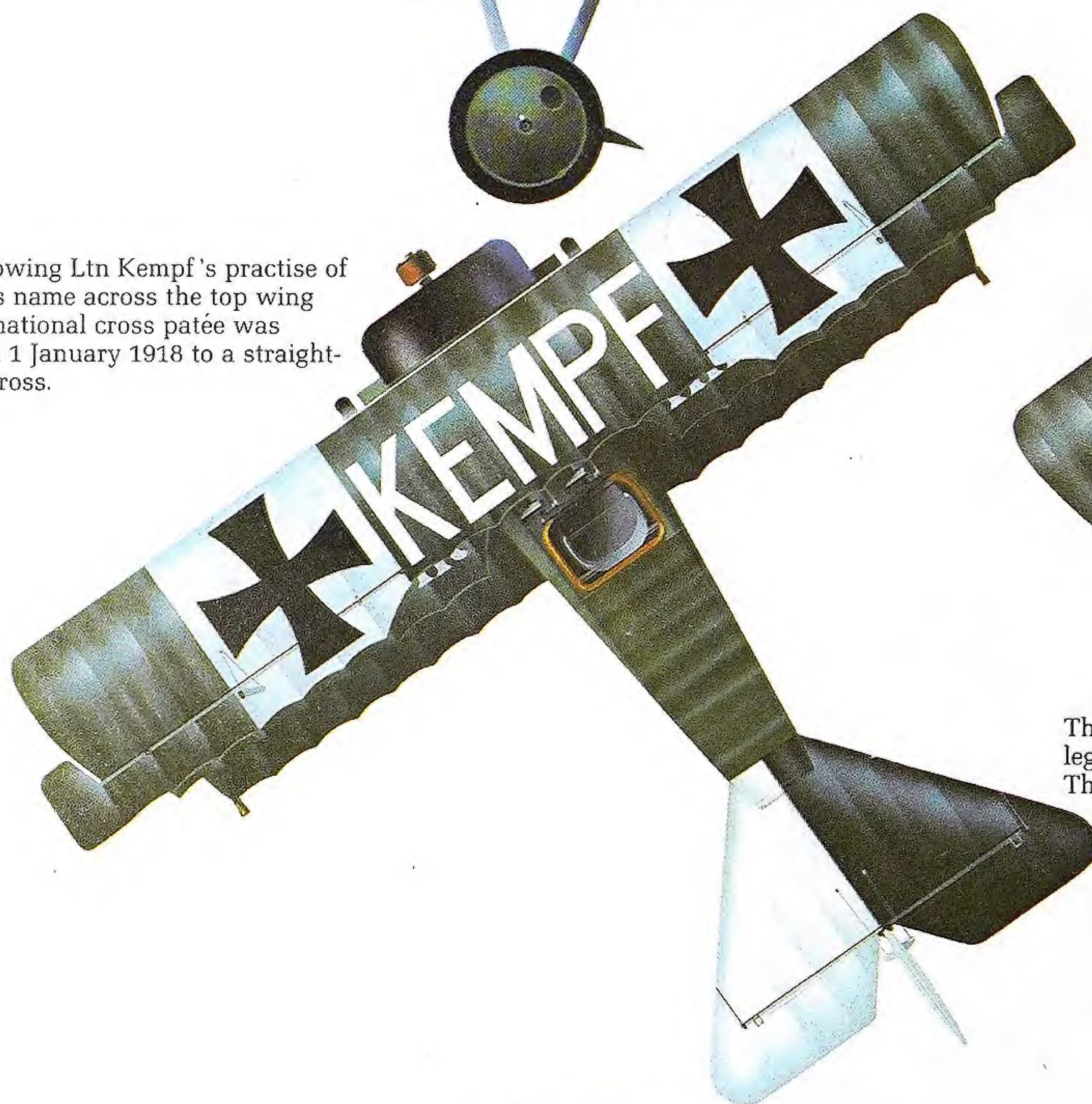
Apart from the Sopwith Camel, the only World War I fighter to hold the imagination of the public was Fokker's diminutive triplane, the Dr I. Its fame was due in great part to the exploits of Germany's leading ace, Baron Manfred von Richthofen, who fought and died flying the type. The Dr I was inspired by the Sopwith Triplane, and Fokker designer Reinhold Platz produced a lightly loaded, fast-climbing, highly maneuverable fighter which in one period on the Western Front equipped some 12 Jagdstaffeln. Production was about 320 aircraft.

Dr I (213/17), JASTA BOELCKE, IMPERIAL AIR SERVICE, WESTERN FRONT, 1917

The aircraft of Ltn Fritz Kempf (whence the white letter K on the fuselage) finished in a dark olive green doped fabric, applied at the factory. Obscured by the lower strokes of the letter K is the Fokker serial (213/17) which was applied to all German aircraft, the number after the stroke being the year of manufacture.



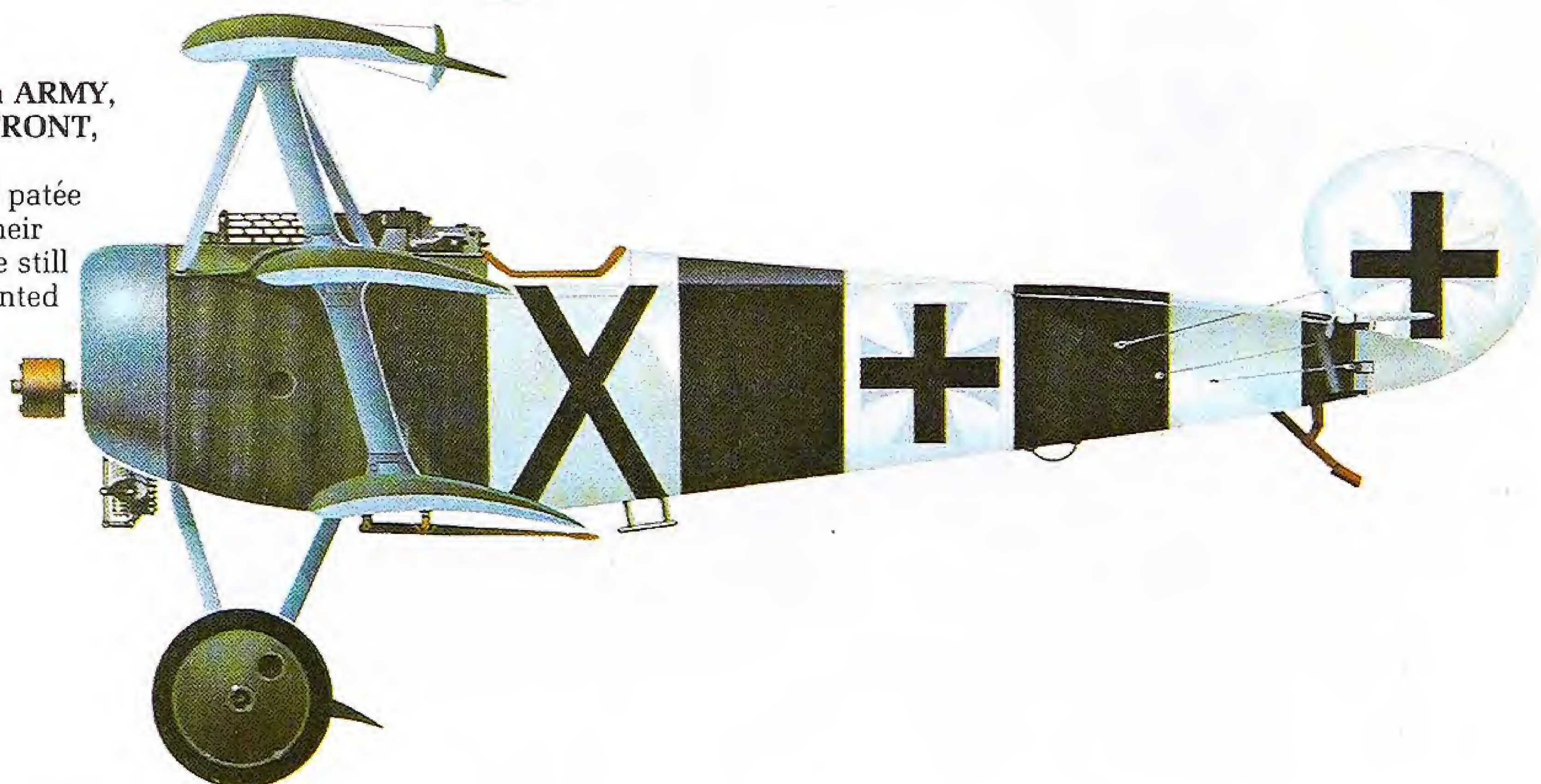
Plan view showing Ltn Kempf's practise of displaying his name across the top wing surface. The national cross patée was changed from 1 January 1918 to a straight-edged Latin cross.



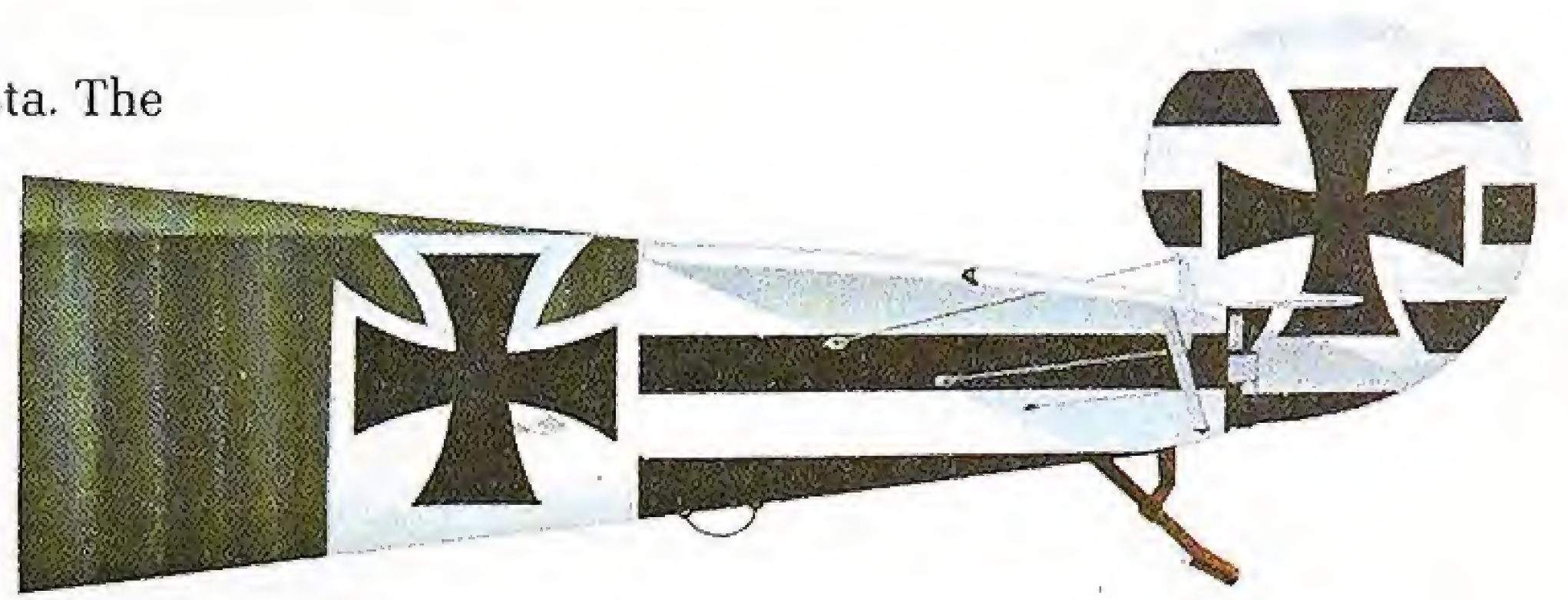
The mid-wing of Kempf's Triplane carried this legend which reads "do you remember me?" The method of dyeing the fabric left an uneven, streaked effect, best shown on the side-view.

Dr I, JASTA 26, III GESCHWADER, 17th ARMY, IMPERIAL AIR SERVICE, WESTERN FRONT, MARCH 1918

The groundcrew has painted out the old patée crosses, leaving the later Latin style in their place, although the original markings are still visible. The stenciled serial has been painted over by the large black and white cross marking under the cockpit.



Dr I rear fuselage of an unidentified Jasta. The remainder of the aircraft was similar to that flown by Kempf (see opposite), with streaked dark olive green dope.



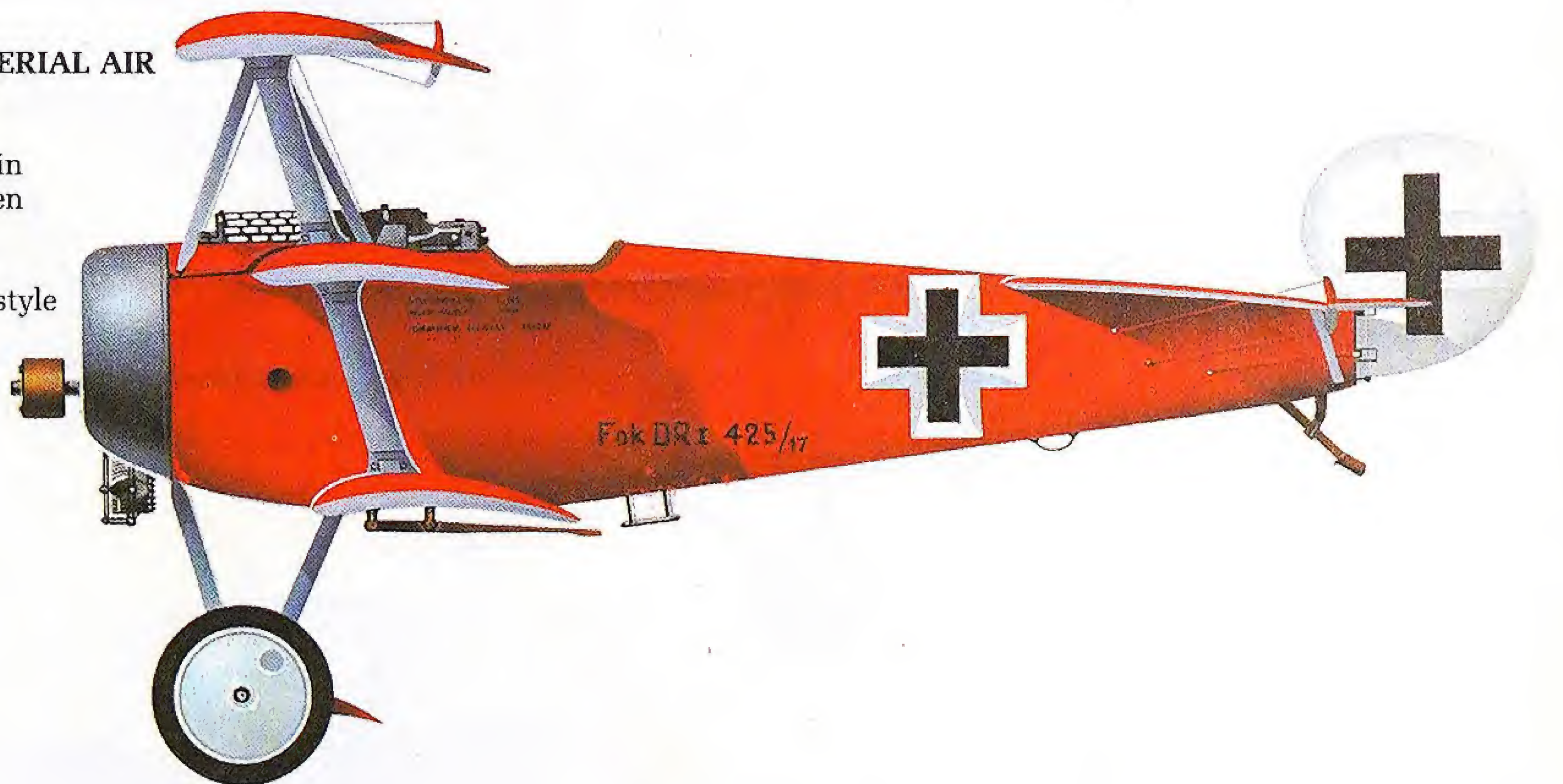
Dr I, JASTA 7, FOURTH ARMY, IMPERIAL AIR SERVICE, WESTERN FRONT, 1918

All-black aircraft flown by Ltn Josef Jacobs, the ninth-ranking German ace. The non-standard white fuselage crosses were repeated on the top and bottom surfaces of the wings.



Dr I 425/17, JAGDGESCHWADER I, IMPERIAL AIR SERVICE, CAPPY, WESTERN FRONT, 21 APRIL 1918

Famous as the vermillion-doped Triplane in which Rittmeister Manfred von Richthofen lost his life. The 110hp Oberursel rotary engine is now among the exhibits of the Imperial War Museum, London. The old style cross can be seen under the later marking.



Dr I, JASTA 18, IMPERIAL AIR SERVICE, WESTERN FRONT, LATE 1918

Acquired by the French after the Armistice in November, this machine carries a bird insignia of the unknown pilot. Standard Triplane armament comprised two fixed 7.92mm MG and 1000 rounds of ammunition.

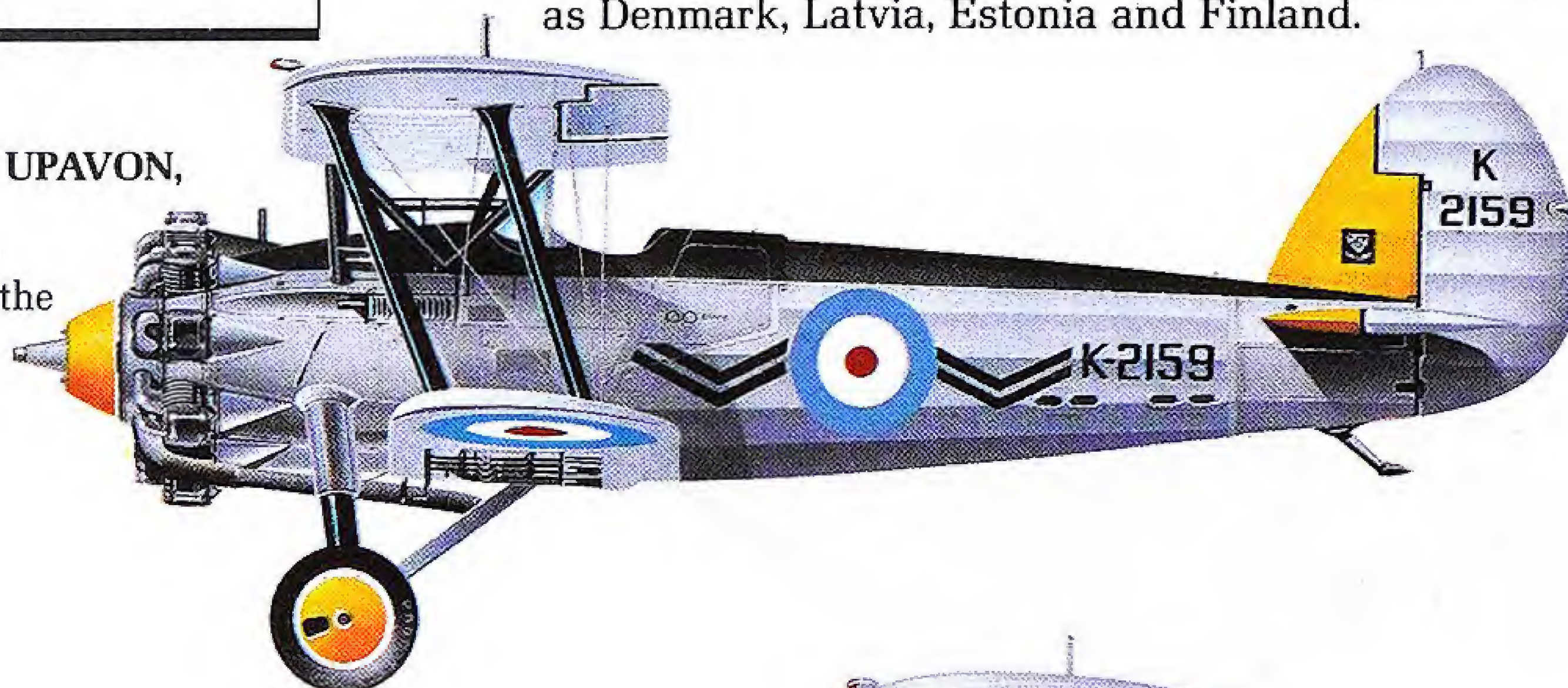


BRISTOL BULLDOG

The epitome of the interwar biplane fighter, the Bulldog made its first flight on 17 May 1927 and entered RAF service with 3 Squadron at Upavon, Wiltshire, in May 1929. At one stage during the mid-1930s, this nimble machine represented some 70 per cent of the UK's fighter force. Production models of the Bulldog were the II, IIA and IVA, and Bristol built a total of 441, just under half being exported to customers such as Denmark, Latvia, Estonia and Finland.

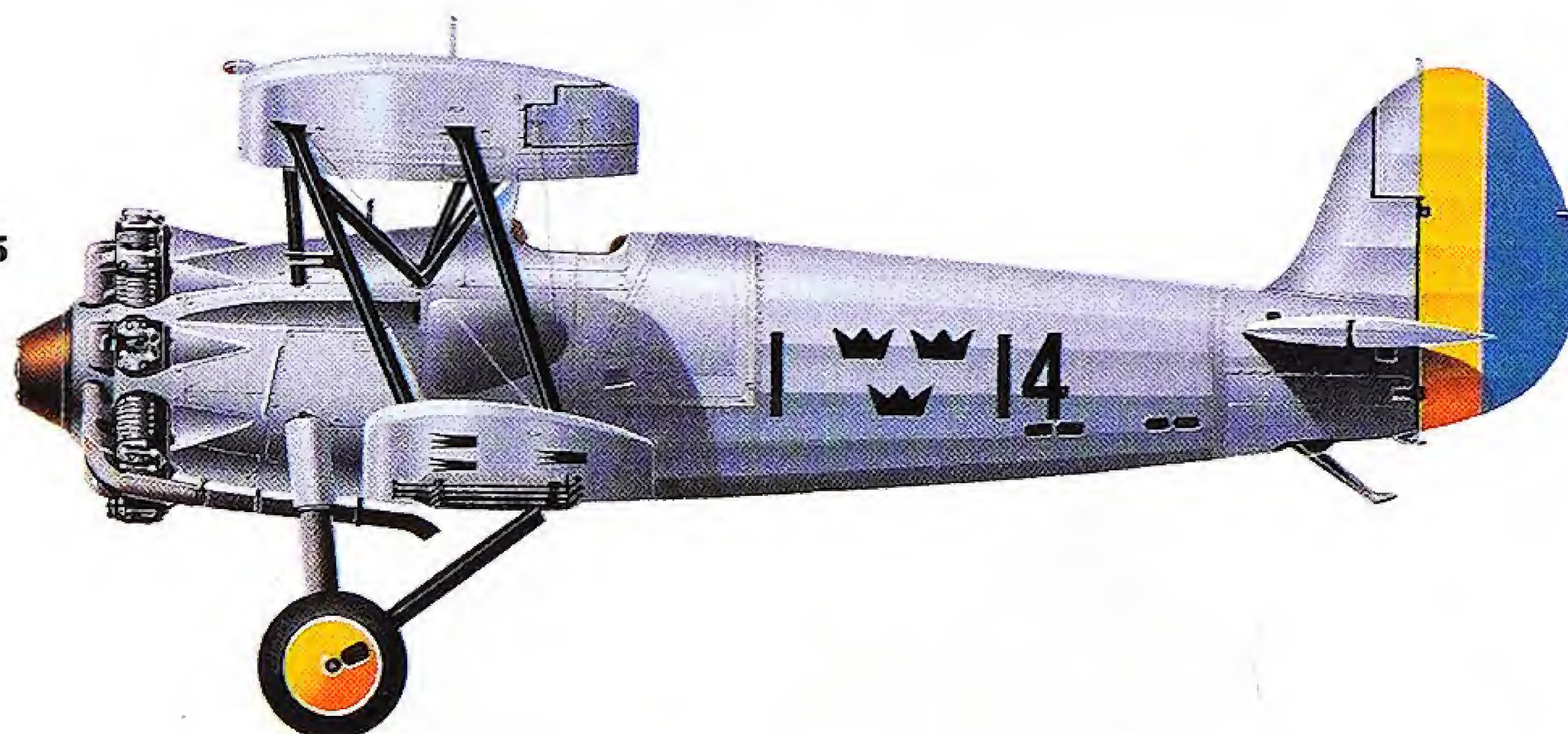
Mk IIA, 17 SQUADRON, RAF UPAVON, UK, 1934

The yellow represented on the spinner, wheels and rudder is the flight leader's color. Black zigzags seen on the fuselage were also applied over the silver-finished top wing surface.



Mk IIA, VASTERAS FLYGKAR (F1), SWEDISH AIR FORCE, 1935

Painted with an overall silver finish; the two black marks on the lower rear fuselage are hand-holds for lifting the aircraft. Later IIA's had their tail skids replaced by a rear wheel.



Mk IIA (BRISTOL TYPE 105D), 1 ESKADRILLE, DANISH ARMY, 1932

This aircraft equipped Denmark's first fighter unit. The badge on the fin is a small 'Bulldog' insignia applied by the Bristol Company and is not a unit badge.



Mk IVA, TLELV 35, FINNISH AIR FORCE, 1942

The yellow band and yellow wingtips were a standard identification feature. The Finnish Air Force bought 17 of this type in 1935 – the last Bulldogs to be built.



Mk II, SPANISH REPUBLICAN FORCES, LAMIACO, SPAIN, 1936–7

This example was a former Latvian aircraft. The hastily applied camouflage was over-painted on the fuselage with a large red identification panel and was flown by foreign volunteer pilots operating with Basque forces.

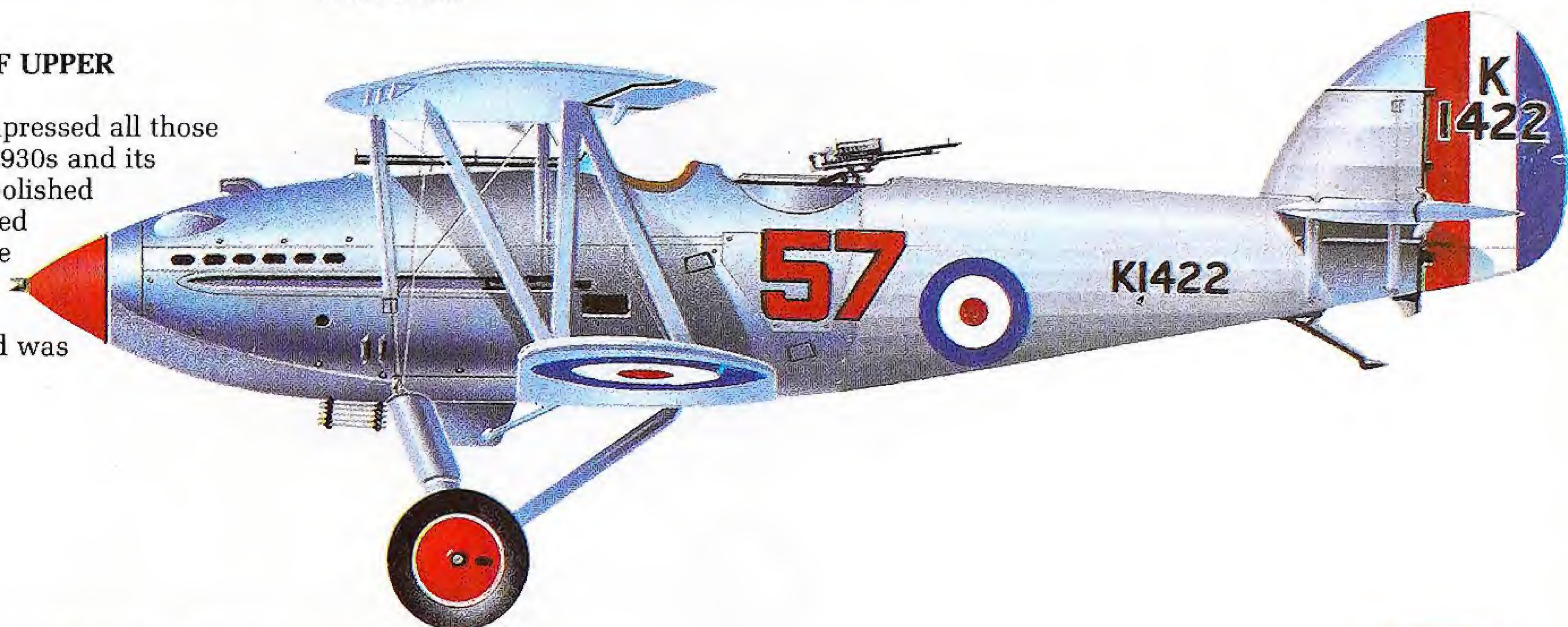


HAWKER HART

One of the most successful inter-war biplanes, the Hart light bomber was advanced for its time in both construction and performance. When it flew in June 1928 it could outdistance any fighter then in service – and most of those on order! The bombload of some 520lb was carried underwing; behind the pilot was a rear gunner armed with a single .303 MG. From the Hart was developed a range of similar aircraft including the Demon, Hector, Audax, Hardy and Osprey, to take production of all types to more than 2700.

Mk I, 57(B) SQUADRON, RAF UPPER HEYFORD, UK, JUNE 1934

The clean lines of the Hart impressed all those who saw it during the early 1930s and its shape was enhanced by the polished metal nose and the silver-doped fabric fuselage, which was the standard finish of the time. The squadron number was finished in the flight color and was 22in high.



HART (T), FLYING TRAINING SCHOOL, RAF, 1935

Built by Hawkers in a batch of 20 aircraft, this Hart trainer has been given a coat of high-visibility paint prior to despatch to one of the many FTSs that were equipped with the type from 1933.



HART (T), RAF MUSEUM, HENDON, UK, 1989

To commemorate the hundreds of Hart trainers that were built and on which so many future RAF pilots learned to fly, this example has been preserved in the RAF Museum, having been discovered in a barn in the north of England in 1962. It was originally built by Armstrong Whitworth and was restored to Museum standard at RAF St Athan.



DEMON I, 604 (COUNTY OF MIDDLESEX) SQUADRON, RAF HENDON, UK, 1936

A two-seat interceptor fighter version of the Hart, the Demon entered service with the RAF in mid-1933; the Royal Australian Air Force also operated the type, ordering 64 in March 1934. This machine carries the colorful markings of an Auxiliary Air Force unit. Note the badge on the fin.



HAWKER FURY

Ordered by the Air Ministry as a fast bomber interceptor, the Fury was the most elegant of fighting biplanes. Originally named Hornet, the prototype flew in March 1929 and Hawker received an order for 118 Fury Is for the RAF. These were followed by 112 of the more powerful Fury II. Exports were made to a number of countries and Yugoslavia built the type under license. Total production was 264.

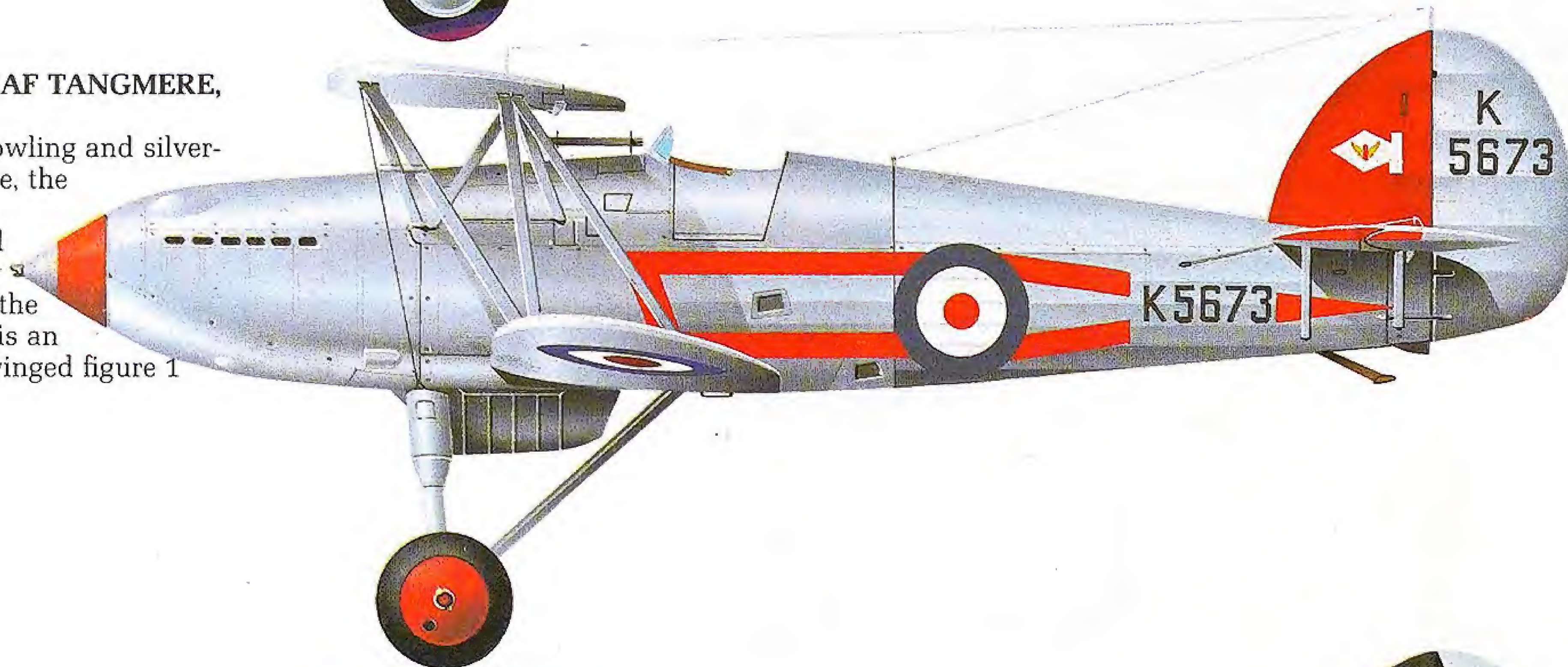
FURY, PORTUGUESE ARMY AIR SERVICE, LISBON, PORTUGAL, 1935

Ordered in November 1933, three Furies with Kestrel engines specially de-rated for longer patrol endurance were operated from June 1934. This was the first aircraft; the greyhound emblem was painted on before delivery.



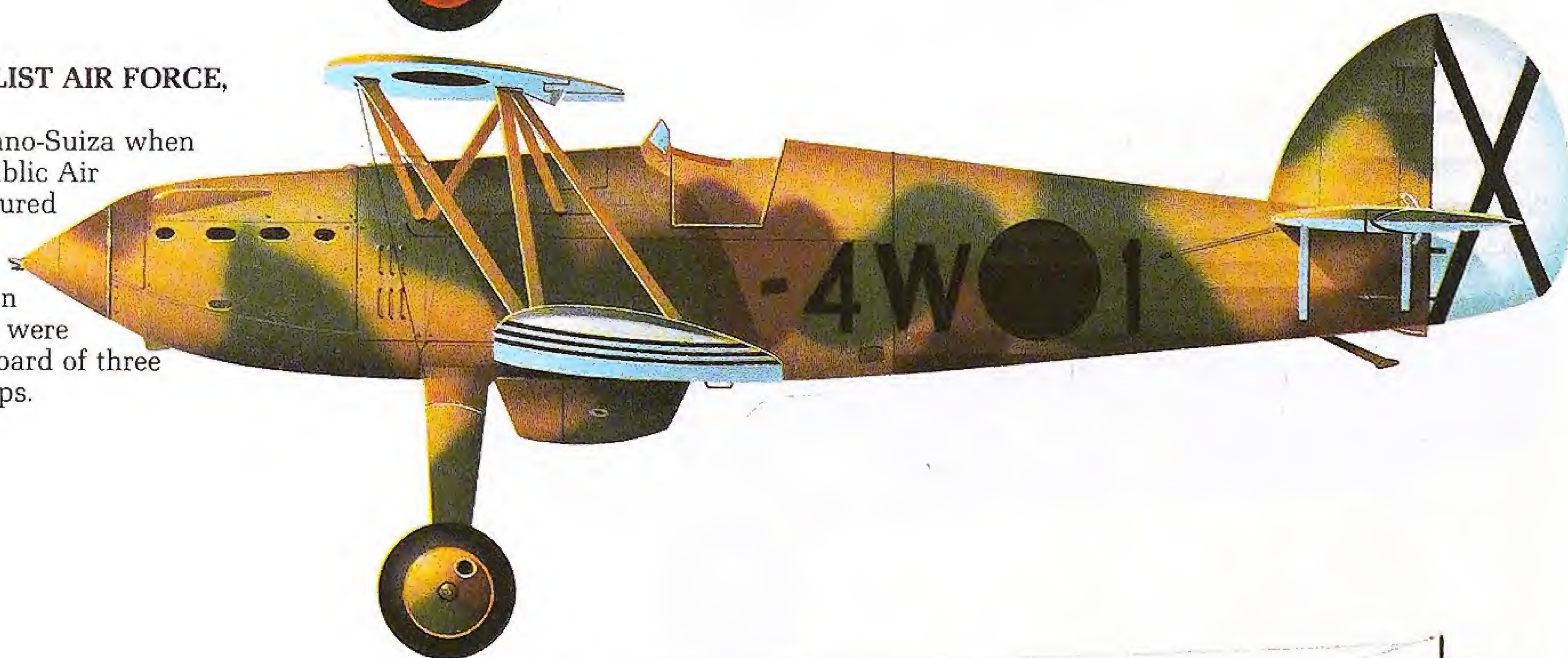
FURY I, 1(F) SQUADRON, RAF TANGMERE, UK, 1936-7

With their highly polished cowling and silver-doped fabric-covered airframe, the Furies came to epitomize the inter-war RAF fighter. As well as 1 Sqn, 25 and 43 also flew Fury Is, the latter unit being the first to equip. On the red fin is an arrowhead in white with a winged figure 1 in the center.



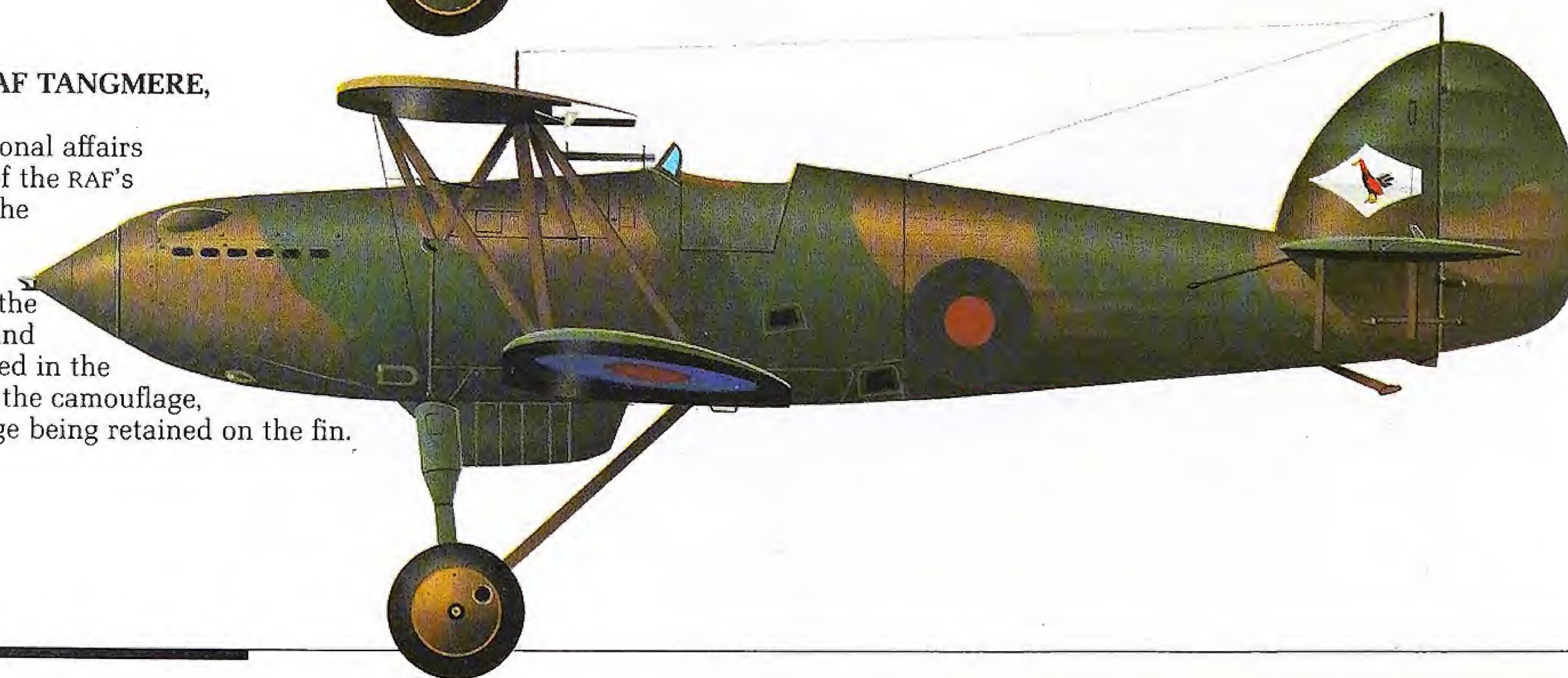
FURY, SPANISH NATIONALIST AIR FORCE, LATE 1930s

Having been rebuilt by Hispano-Suiza when flying with the Spanish Republic Air Force, this machine was captured by the Nationalists and resprayed with a random blotch pattern of green, brown and tan. Broad white crosses were applied above the wings, inboard of three black bands painted at the tips.



FURY II, 43 SQUADRON, RAF TANGMERE, UK, LATE 1938

The deterioration in international affairs prompted the camouflaging of the RAF's front-line aircraft, including the silver biplanes that were beginning to be replaced by the new monoplane fighters, the Hurricane and Spitfire. Red and blue Type B roundels appeared in the usual insignia positions over the camouflage, the unit's Fighting Cock badge being retained on the fin.

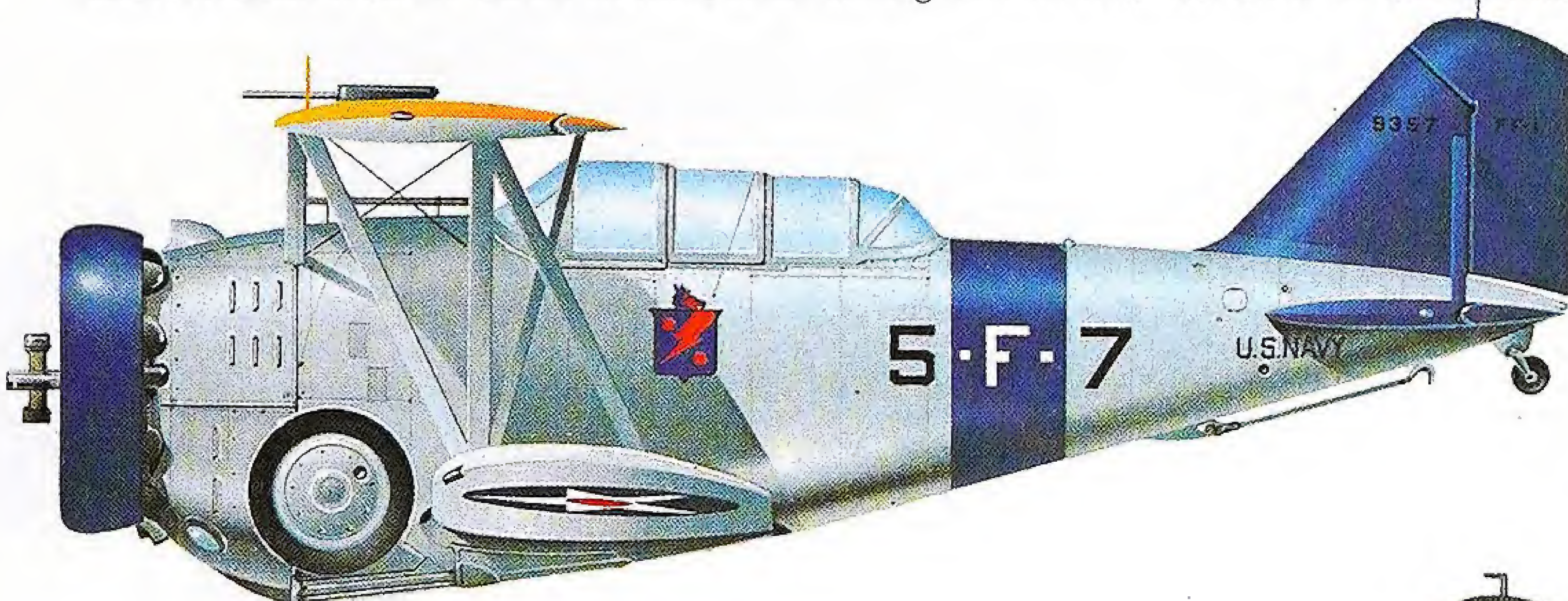


GRUMMAN G-5

This was the aircraft in which observers with strong arms were needed because it was their job to operate the long jackscrew which retracted the main undercarriage into the belly of the portly "Fifi" after take-off. The first US Navy aircraft to have this feature, the prototype XFF-1 flew in December 1931 and proved a sprightly performer for its day, exceeding 200mph with a Wright Cyclone engine in later production aircraft. It entered service in mid 1933, but was relegated to the Reserve three years later. Canada built 57 under license, some seeing service with the RCAF as the Goblin.

FF-1, VF-5B "RED RIPPERS," US NAVY, USS LEXINGTON, 1934-5

One of the 27 FF-1s ordered for use aboard Navy carriers and finished in the colors of the 3rd Section Leader of the Squadron. The blue tail denoted the *Lexington*, while under the cockpit is the boar's head unit insignia. From this ungainly looking Grumman design stemmed a range of aircraft that was to culminate in the Mach 2 Tomcat interceptor of today's Navy.

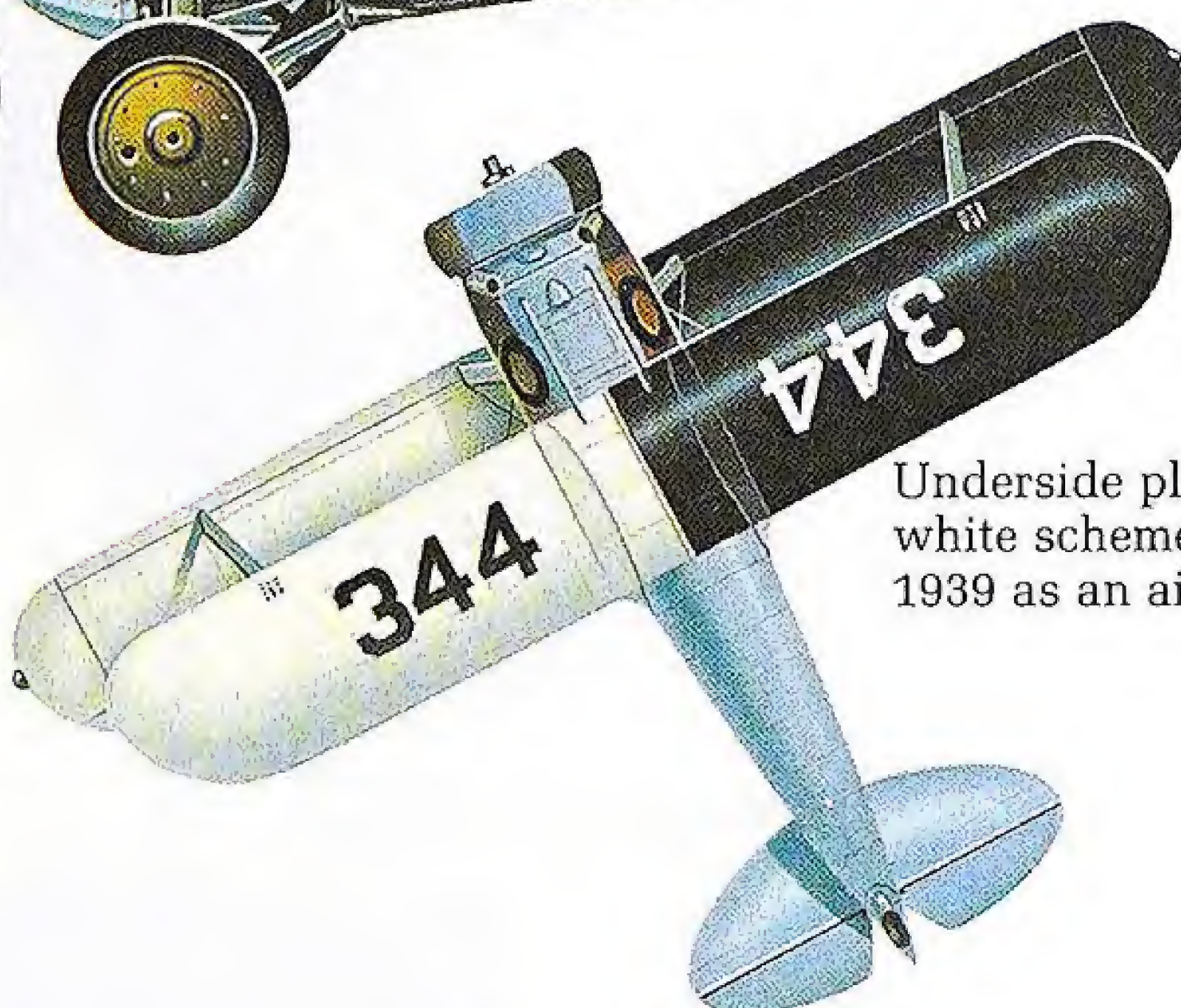
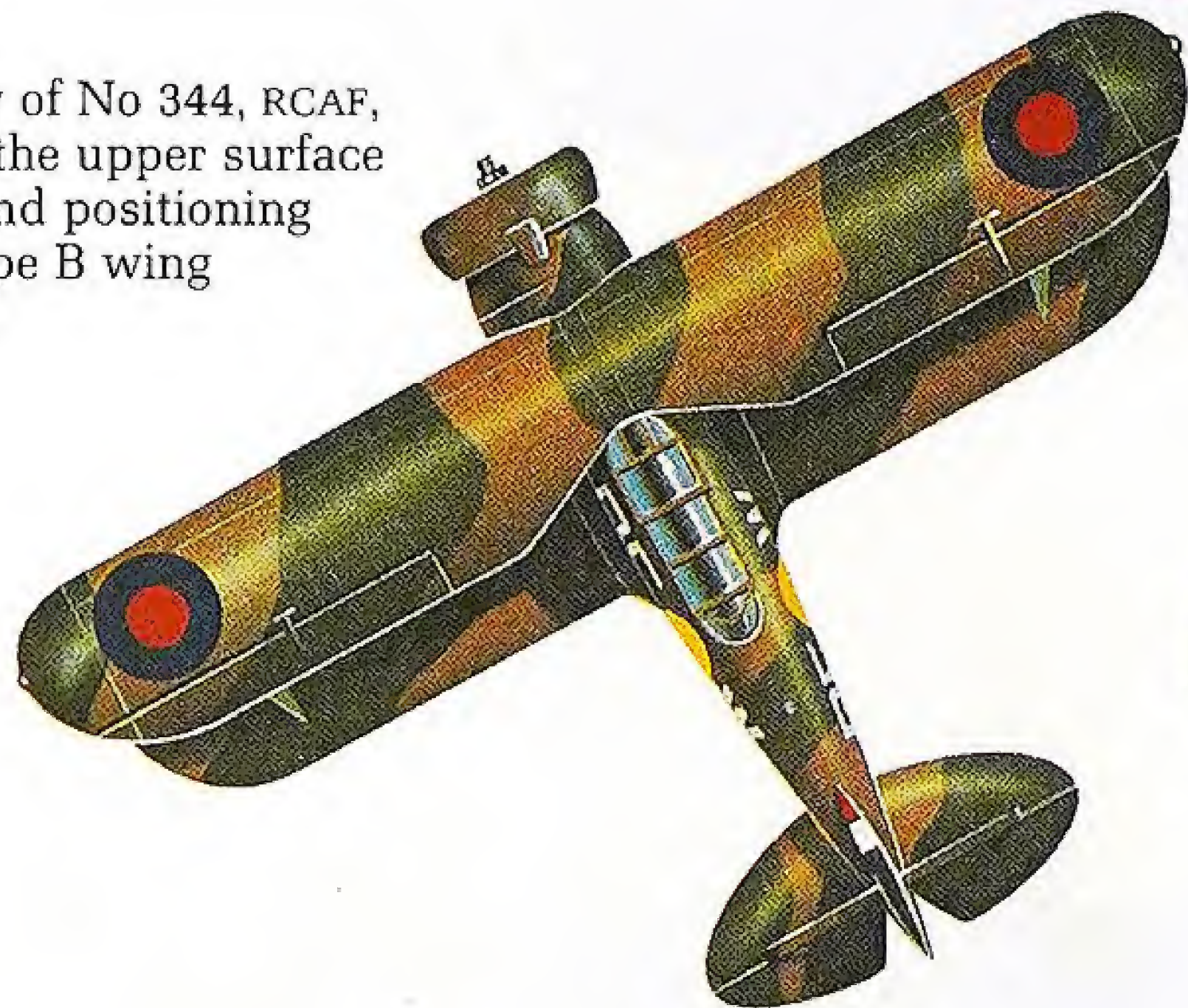


GOBLIN, 118 (F) SQUADRON, ROYAL CANADIAN AIR FORCE, DARTMOUTH, NOVA SCOTIA, CANADA, 1941

The Canadian machines were assembled by Canadian Car & Foundry, Grumman producing the fuselages and Brewster the wings and tail surfaces. Sixteen were taken on charge by the RCAF, this machine receiving the standard Dark Green and Dark Earth disruptive camouflage.



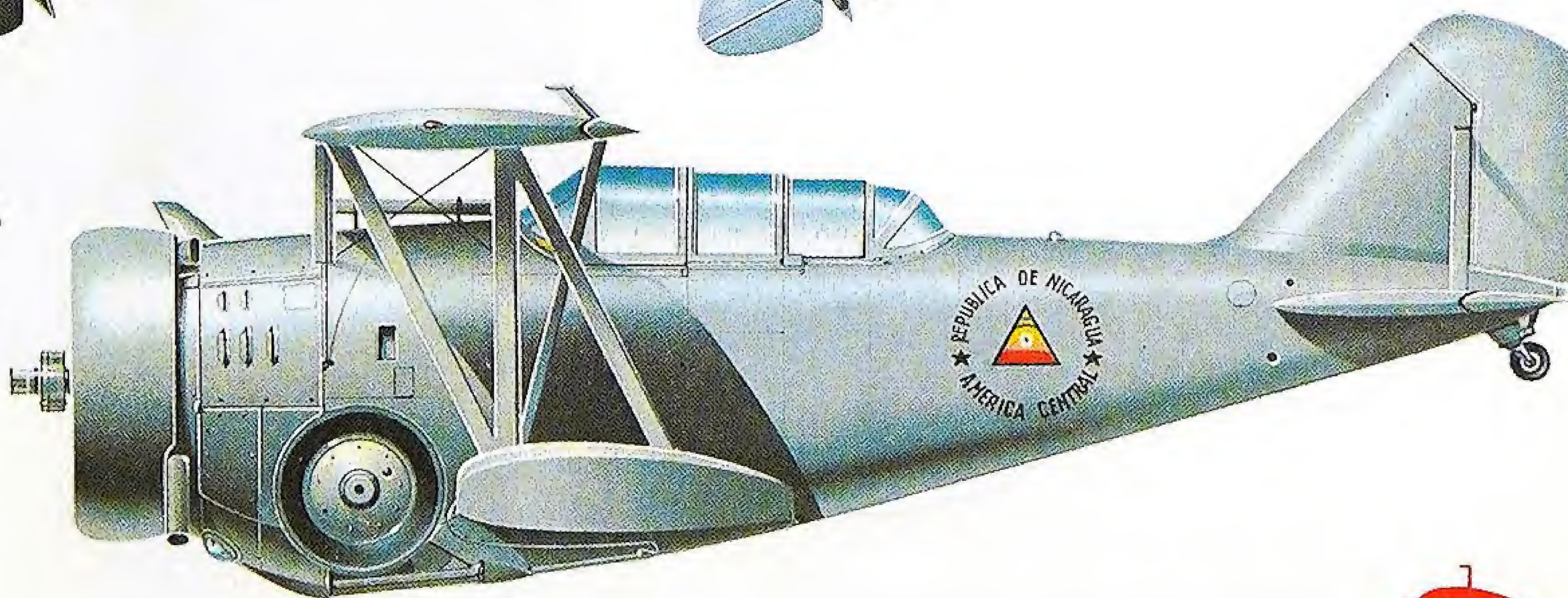
Plan view of No 344, RCAF, showing the upper surface pattern and positioning of the Type B wing roundels.



Underside plan illustrating the black and white scheme, initiated by the RAF in 1939 as an aid to identification.

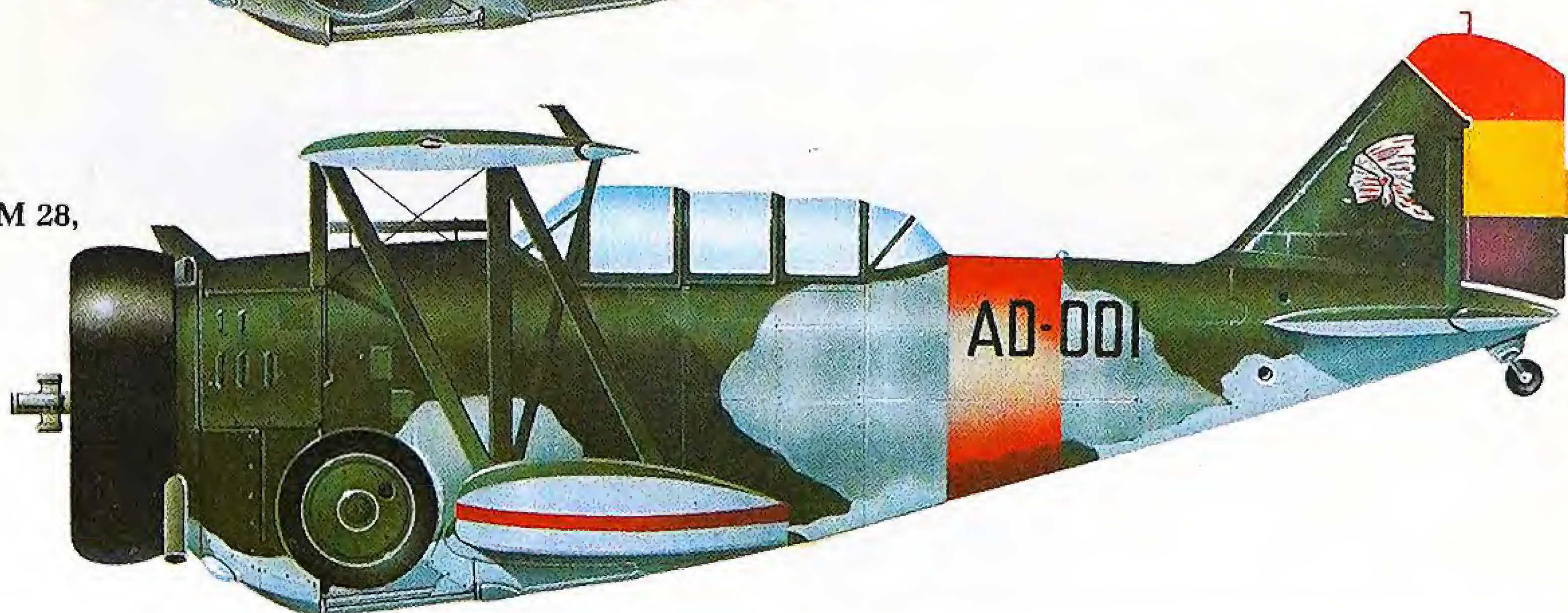
GE-23, NICARAGUAN AIR ARM, MANAGUA, NICARAGUA, 1938

The sole example of its type supplied to the Nicaraguan Government, it retained its natural light alloy finish. Basic armament of the production FF-1 comprised a single .30in MG on top of the forward fuselage and two .30in guns in a flexible mount in the rear cockpit and fired by the observer.



GE-23 DELFIN, 1 ESCUADRILLA, GRUPO NUM 28, SPANISH REPUBLICAN AIR FORCE, SPAIN, 1938

Named Dolphin in Republican use, this aircraft appears to have received a half-hearted attempt at a camouflage scheme. From its number it was probably the first of 34 actually delivered of a planned order for 50. The red band was painted above and below both wings as well as round the center fuselage.

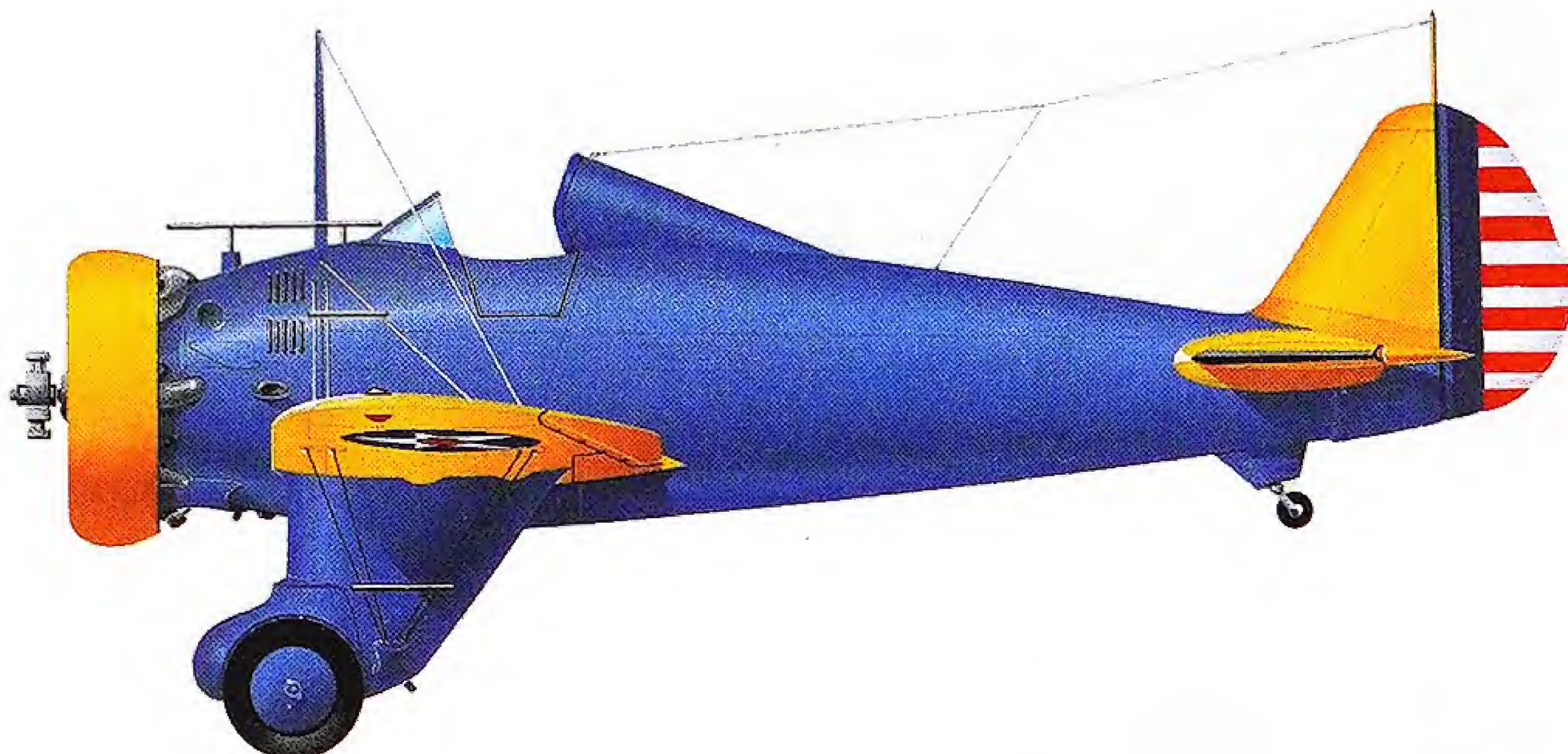


BOEING P-26

America's switch from biplane to monoplane fighters is best exemplified by the P-26, or Peashooter, as it became known in the Air Corps. Conservative features still held sway and the USAAC accepted an open cockpit, external wire bracing and a fixed undercarriage. However, it was an all-metal airplane. Delivery of 136 began in 1934 and exports were made to Panama, the Philippines and Guatemala. The similar Model 281 was sold to China.

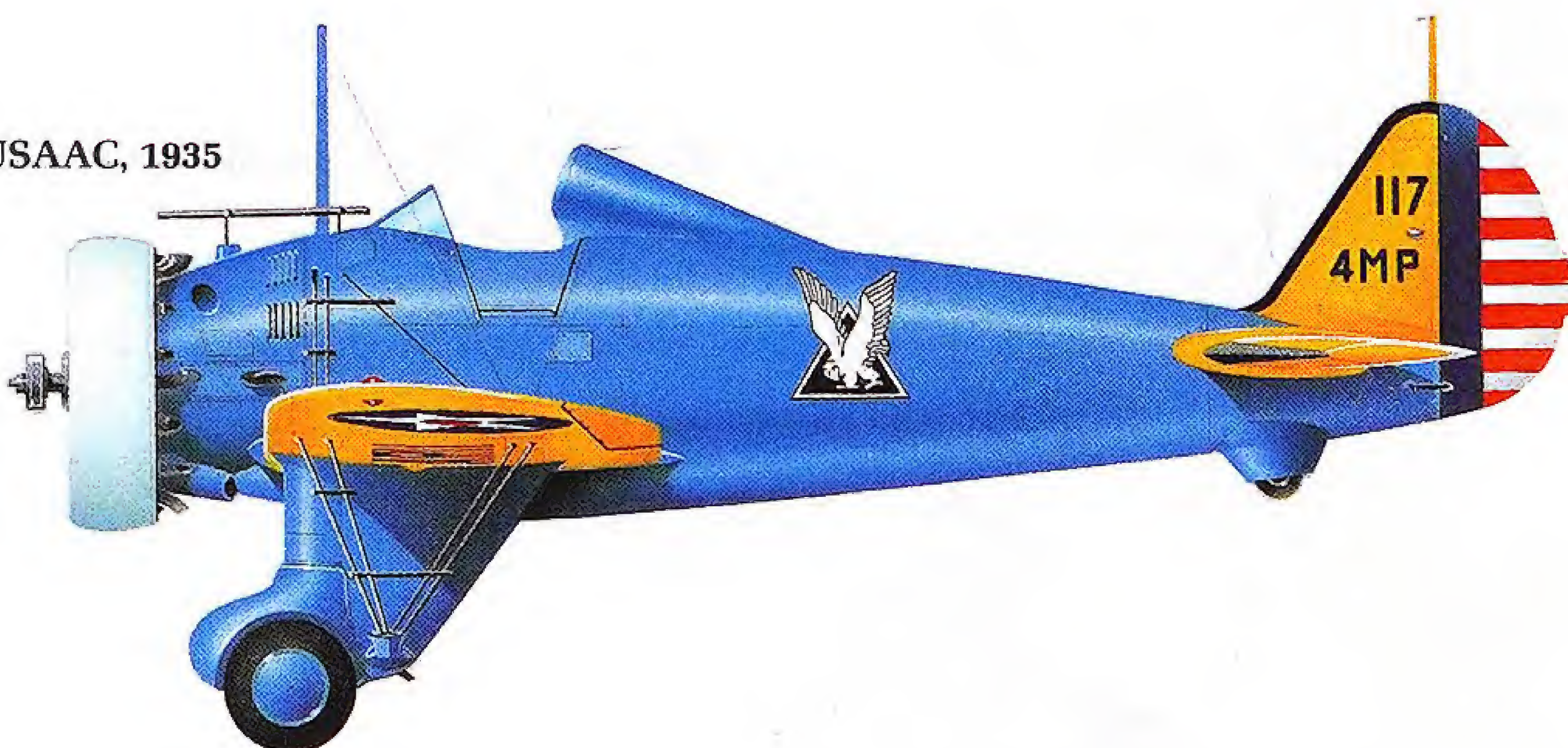
P-26B, US ARMY AIR CORPS, JUNE 1934

One of two aircraft given the B sub-type designation, this machine has a fuel-injection system and also incorporated wing flaps, which the Army considered necessary owing to the P-26A's high landing speed.



P-26A, 17th PURSUIT SQUADRON, 1st PURSUIT GROUP, USAAC, 1935

Even post-war USN markings didn't better the USAAC pre-war colors, typified by the aircraft shown on these pages. The underwing markings were divided into "U.S." under the starboard side and "ARMY" under the port side.

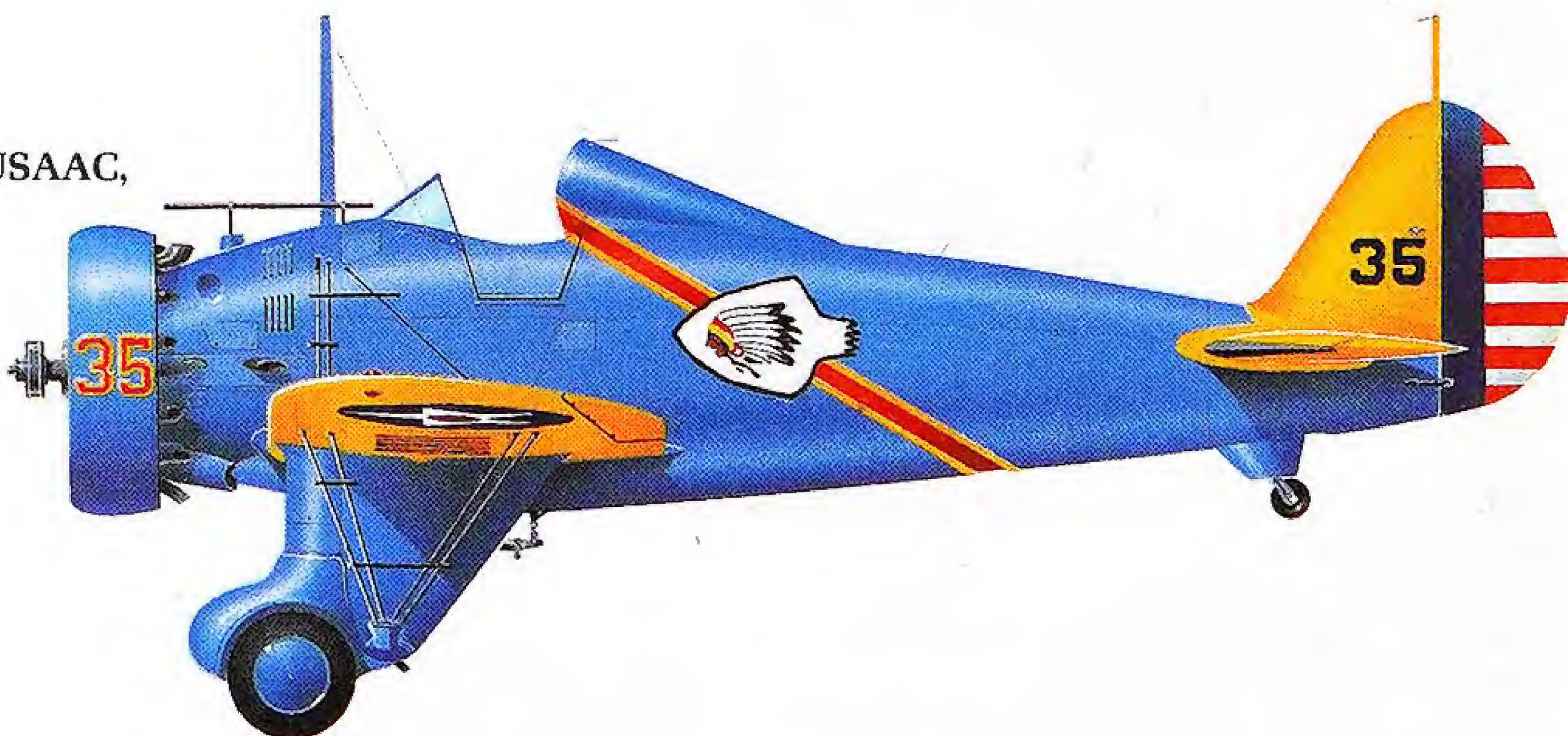


Emblem of the 17th Pursuit Sqn.



P-26A, 94th PURSUIT SQUADRON, 1st PURSUIT GROUP, USAAC, SELFRIDGE, USA, 1937

All aircraft of this group incorporated a diagonal fuselage band painted in the squadron color with the unit emblem superimposed.

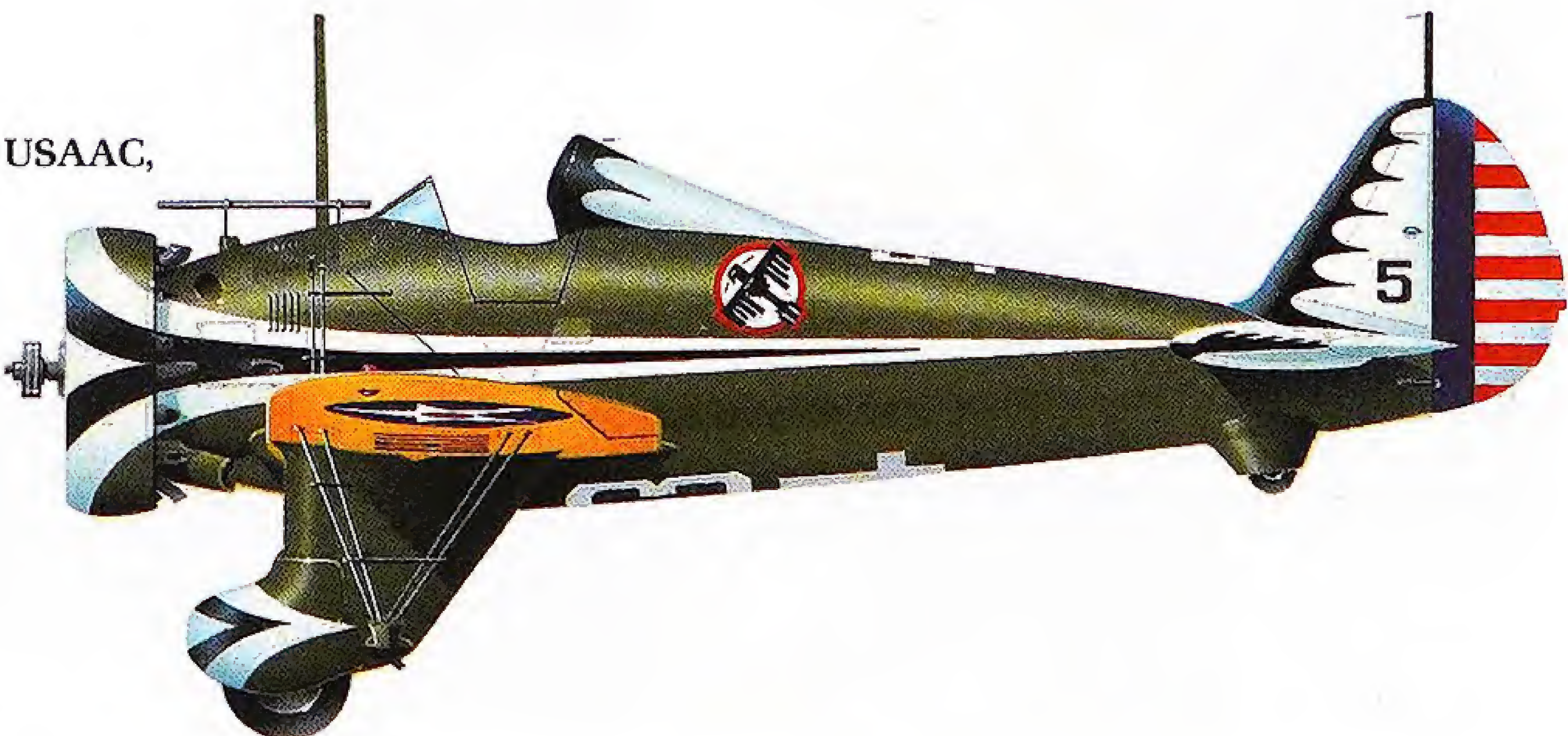


Indian Head emblem of the 94th Pursuit Sqn.



P-26A, 34th PURSUIT SQUADRON, 17th PURSUIT GROUP, USAAC, MARCH FIELD, USA, 1934

The standard USAAC Olive Drab fuselage was repainted Blue during the course of the year. Under the fuselage the unit number (34) can just be made out; on the top is the individual aircraft number (5).



Thunderbirds insignia of the 34th Pursuit Sqn.



P-26A, 95th PURSUIT SQUADRON, 17th ATTACK GROUP, USAAC, 1934

As with other aircraft at this time, the Olive Drab was replaced by Blue during the year. Standard armament of the P-26A comprised two .30in MGs, or one .30in and one .50in MG, with provision for light bombs under the fuselage and wings.



Bucking Mule marking of the 95th Pursuit Sqn.



P-26A, HQ SECTION, 17th PURSUIT GROUP, USAAC, MARCH FIELD, USA, 1934

Group colors are painted on the engine cowl, with the colors repeated in a band around the fuselage. On this version the tailwheel remained semi-submerged in the housing when flying.

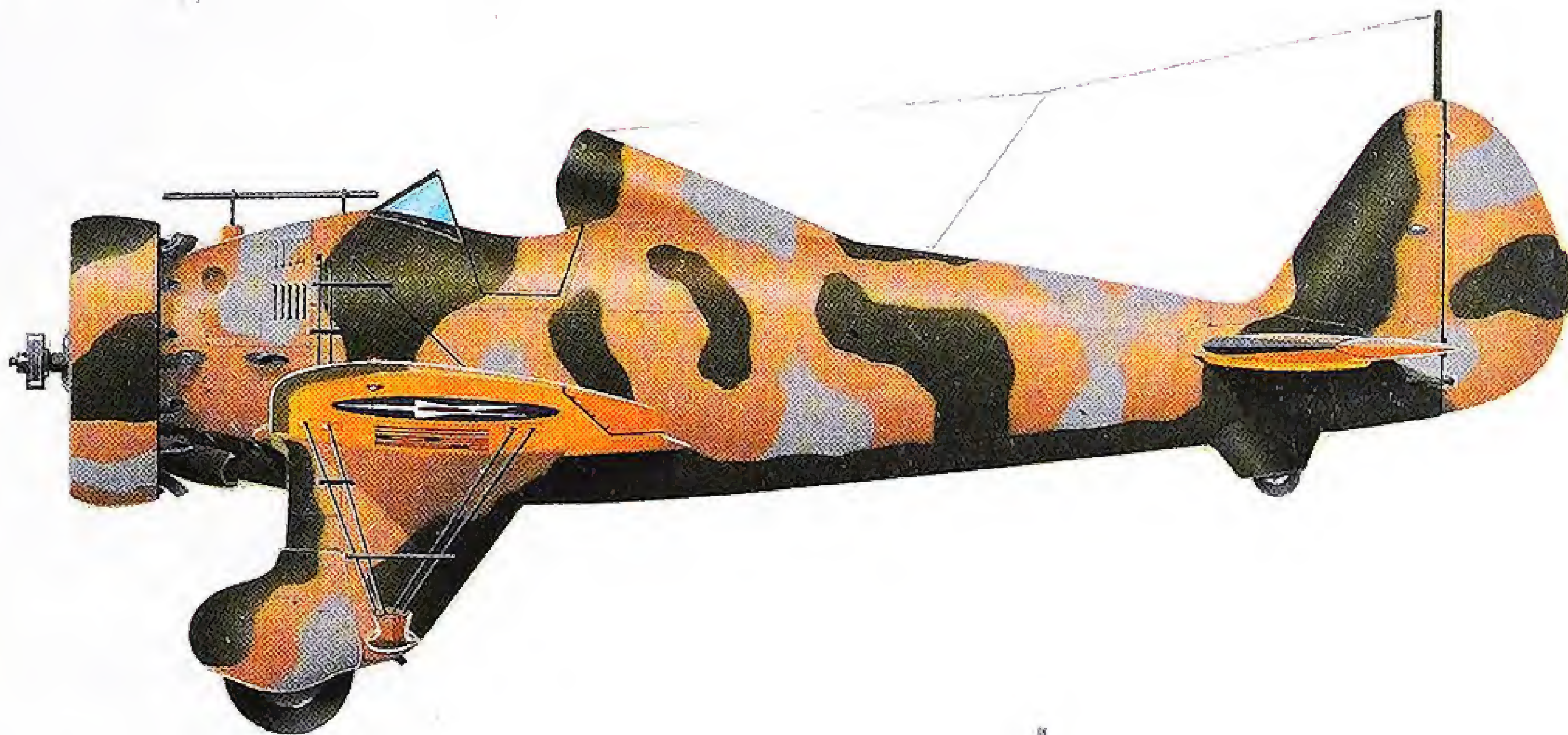


Emblem of the 17th Group.



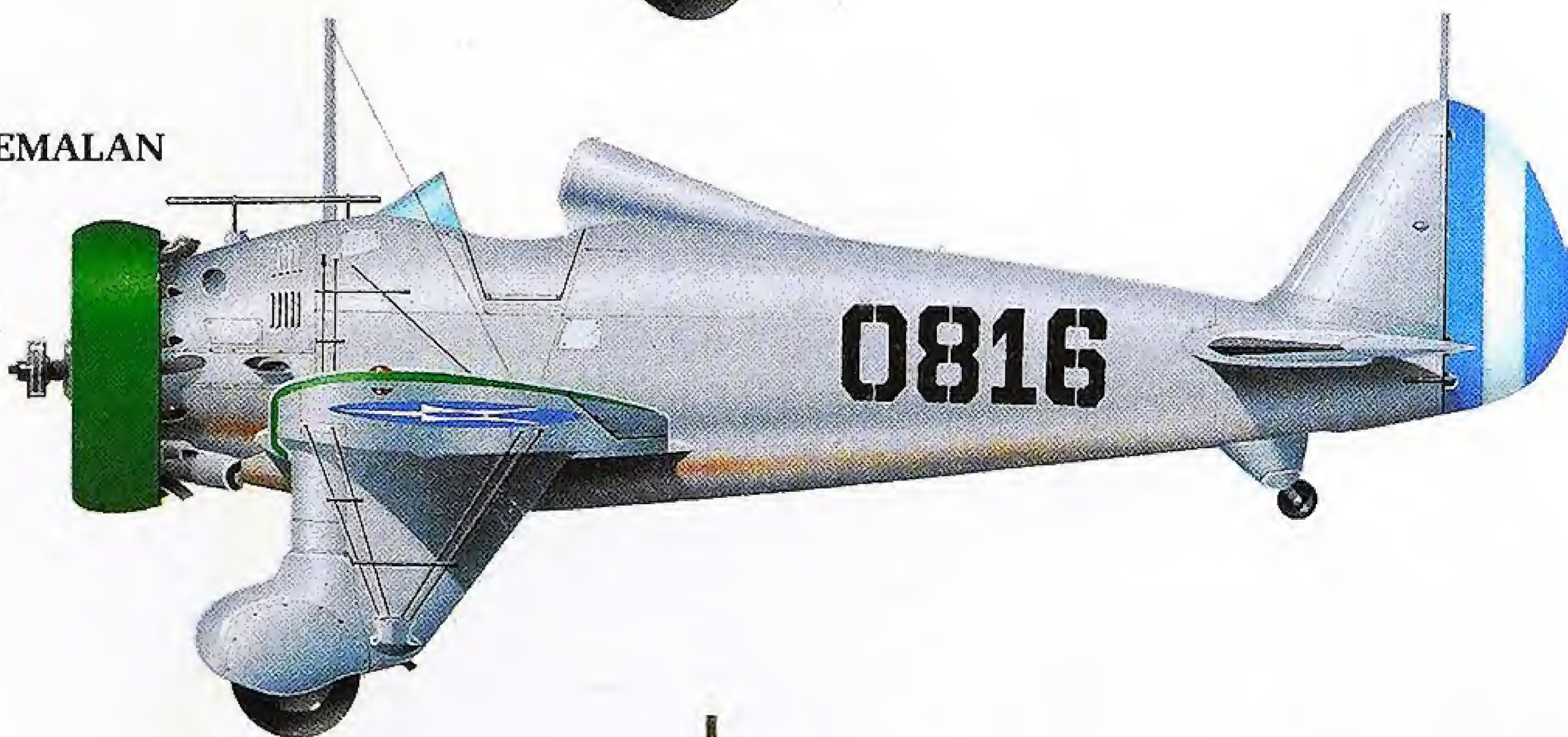
P-26A, 34th PURSUIT SQUADRON, 17th PURSUIT GROUP, USAAC, MARCH FIELD, USA, 1935

An aircraft specially painted for a camouflage evaluation in a disruptive scheme of Desert Sand with random patches of Olive Drab and Gray over-sprayed. This was not adopted as a standard scheme, although variations on it were used in World War II, particularly in North African operations from 1942.



P-26A, ESCUADRON DE CAZA, GUATEMALAN AIR FORCE, CAMPO DE LA AURORA, GUATEMALA CITY, LATE 1940s

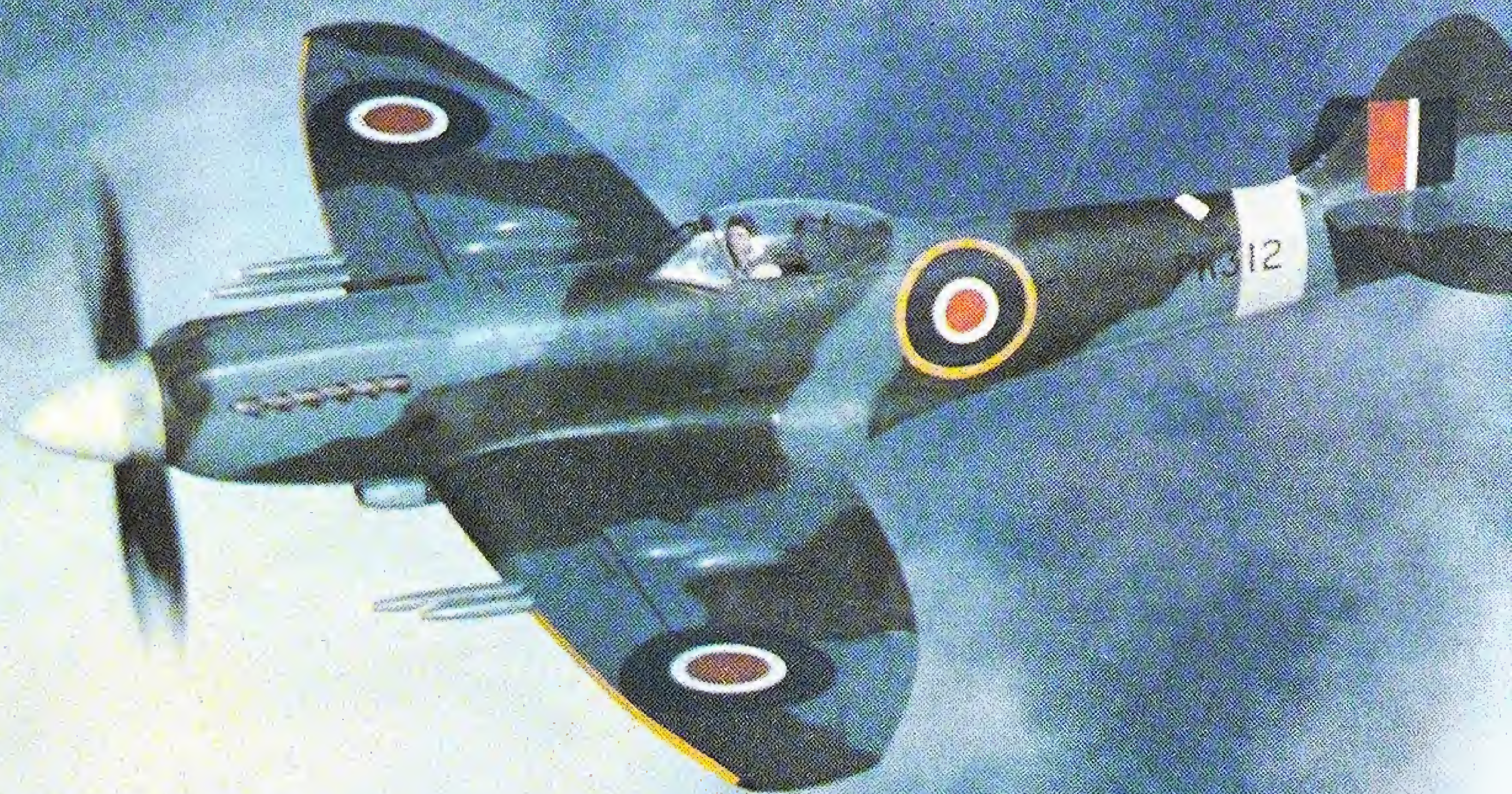
Two aircraft were originally sold to Guatemala and were later supplemented by some ex-Panamanian examples in 1942-3. The survivors were still in use as trainers in the late 1950s, and two were returned to museums in the USA.



P-26A, 18th PURSUIT GROUP, USAAC, WHEELER FIELD, HAWAII, DECEMBER 1941

A P-40-equipped unit, the 18th retained a few Peashooters on strength as hack and training aircraft. A Philippines P-26 is credited with destroying a Japanese bomber shortly after the Pearl Harbor attack.





Into the Abyss

1935-1945

ARMSTRONG WHITWORTH WHITLEY	60	DOUGLAS DC-3	40	LOCKHEED P-80 SHOOTING STAR	114
AVRO LANCASTER	104	DOUGLAS A-20 BOSTON	69	LOCKHEED VENTURA	91
BELL P-39 AIRACOBRA	97	DOUGLAS A-26 INVADER	110	MACCHI M.C. 205	86
BLACKBURN FIREBRAND	111	FAIREY BATTLE	56	MARTIN B-26 MARAUDER	96
BLOHM und VOSS Bv 138	80	FAIREY SWORDFISH	44	MESSERSCHMITT Bf 109	54
BOEING B-17 FLYING FORTRESS	52	FIAT CR.42	73	MESSERSCHMITT Bf 110	66
BOEING B-29 SUPER-FORTRESS	112	FIESELER Fi 156 STORCH	58	MITSUBISHI G4M 'BETTY'	90
BOULTON PAUL DEFIANT	71	FOCKE-WULF Fw 190	92	MITSUBISHI A6M REISEN (ZERO-SEN)	74
BREWSTER BUFFALO	82	FOCKE-WULF Fw 200 CONDOR	62	MORANE-SAULNIER M.S. 406	63
BRISTOL BEAUFIGHTER	75	GLOSTER GAUNTLET	39	NAKAJIMA Ki-49 DONRYU	85
BRISTOL BLENHEIM 1	38	GLOSTER GLADIATOR	49	NORTH AMERICAN HARVARD	107
BRISTOL BLENHEIM IV	59	GRUMMAN TBF AVENGER	76	NORTH AMERICAN B-25 MITCHELL	88
CONSOLIDATED PBV CATALINA	70	GRUMMAN F6F HELLCAT	93	NORTH AMERICAN P-51 MUSTANG	103
CONSOLIDATED B-24 LIBERATOR	87	HAWKER FURY/SEA FURY	115	PETLYAKOV PE-2	100
CURTISS SBC HELLDIVER	48	HAWKER HURRICANE	50	REPUBLIC P-47 THUNDERBOLT	108
CURTISS HAWK (P-40 WARHAWK/TOMAHAWK)	78	HEINKEL He 111	46	SHORT SUNDERLAND	81
DE HAVILLAND MOSQUITO	94	HENSCHEL Hs 129	77	SAVOIA-MARCHETTI S.M.79	47
DORNIER Do 17	53	ILYUSHIN Il-2	106	SUPERMARINE SPITFIRE	64
DOUGLAS DAUNTLESS	84	JUNKERS Ju 52	42	VOUGHT F4U CORSAIR	98
		JUNKERS Ju 87	57	VOUGHT SB2U VINDICATOR	61
		JUNKERS Ju 88	72		
		LAGG-3	101		
		LOCKHEED HUDSON	68		
		LOCKHEED P-38 LIGHTNING	102		
		LOCKHEED NEPTUNE	113		

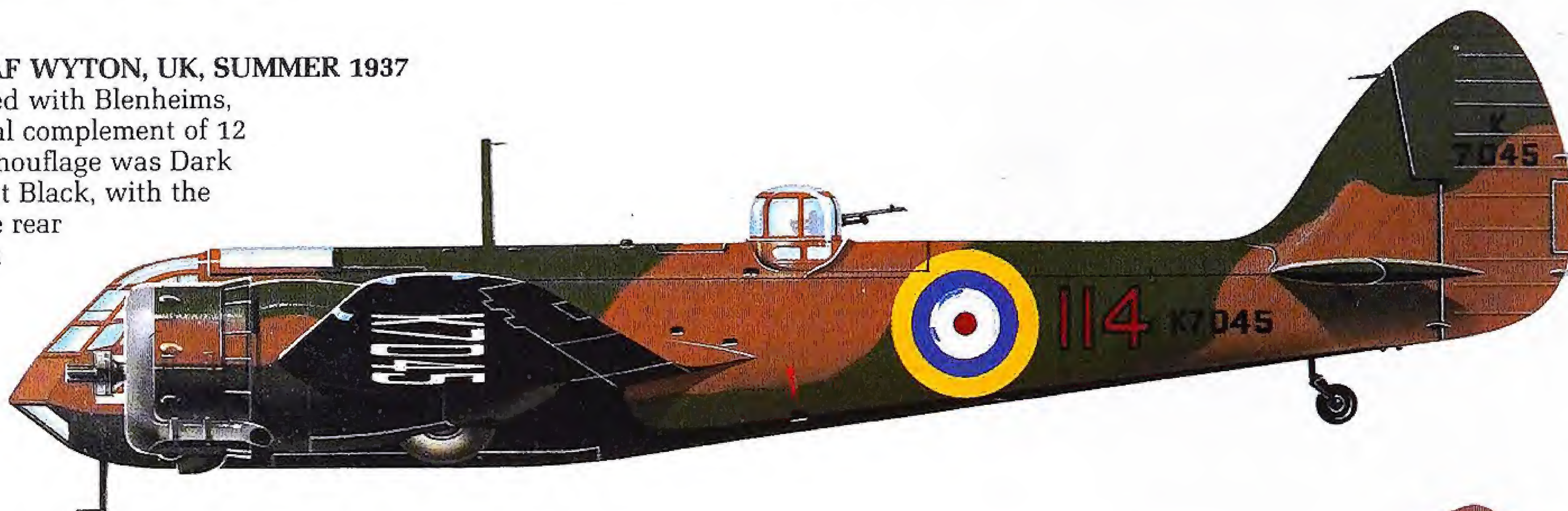


BRISTOL BLENHEIM 1

The RAF's first all-metal, stressed-skin monoplane to enter production. The Blenheim outshone most biplane fighters then in service when the early squadrons formed in the late 1930s. However, like many aircraft of its day, it had been overtaken by monoplane fighter development and it stood little chance of surviving against the German Bf 109 during the early daylight operations. Production of the Mk I topped the 1450 mark before the lines were switched to the long-nose Mk IV series.

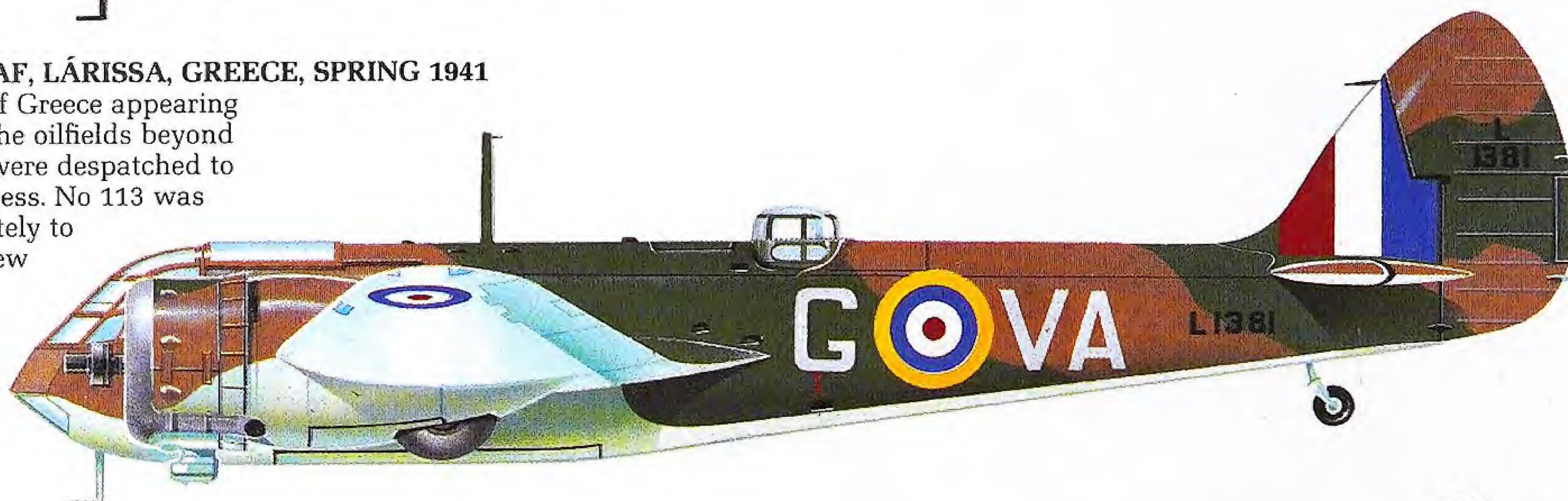
Mk I, 114 SQUADRON, RAF WYTON, UK, SUMMER 1937

The first unit to be equipped with Blenheims, 114 Sqn received its original complement of 12 aircraft in March 1937. Camouflage was Dark Green, Dark Earth and matt Black, with the unit number applied on the rear fuselage. Code letters FD in gray replaced the unit number in 1938.



Mk I, 113 SQUADRON, RAF, LÁRISSA, GREECE, SPRING 1941

With the Italian invasion of Greece appearing to be an attempt to get to the oilfields beyond Turkey, more RAF aircraft were despatched to Greece to halt Italian progress. No 113 was one unit that tried desperately to stem the advance, but its few Blenheims were no match for the Axis fighters (which included German Bf 109s) and most were destroyed on the ground during strafing attacks.



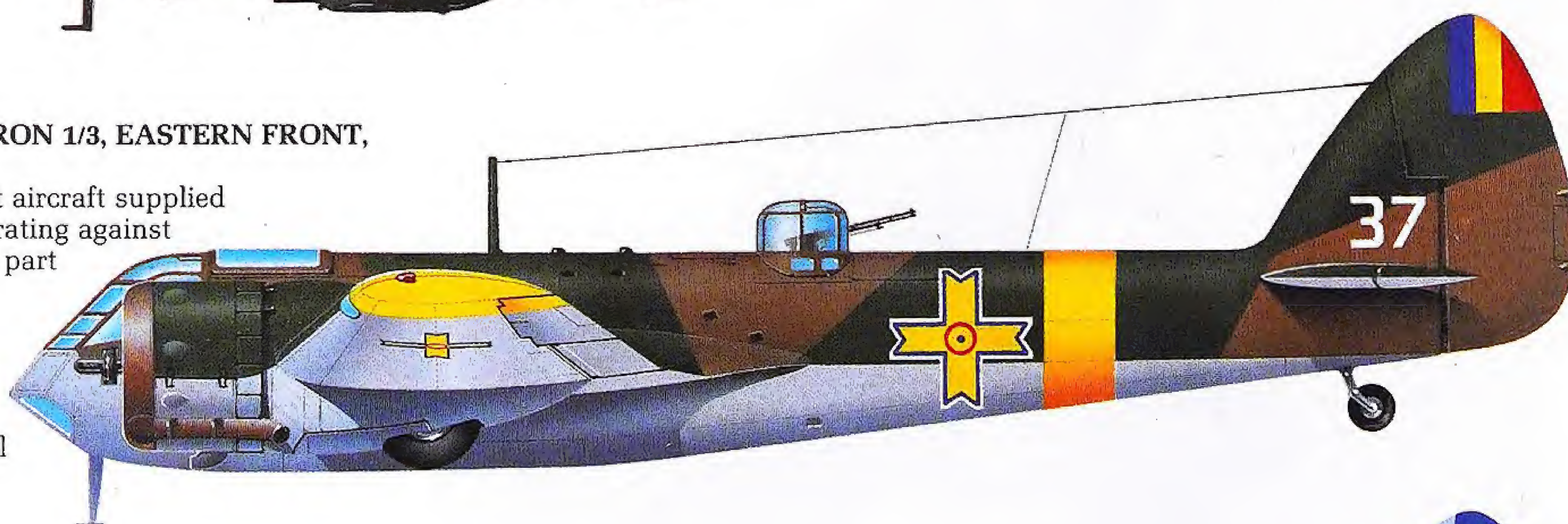
Mk IF, 54 OPERATIONAL TRAINING UNIT, RAF, SEPTEMBER 1941

It was as a night fighter that the early Blenheim proved successful. Some 200 were converted with an under-fuselage tray of four machine guns and AI (air-interception) radar. YX-N is finished in Special Night (Black) overall.



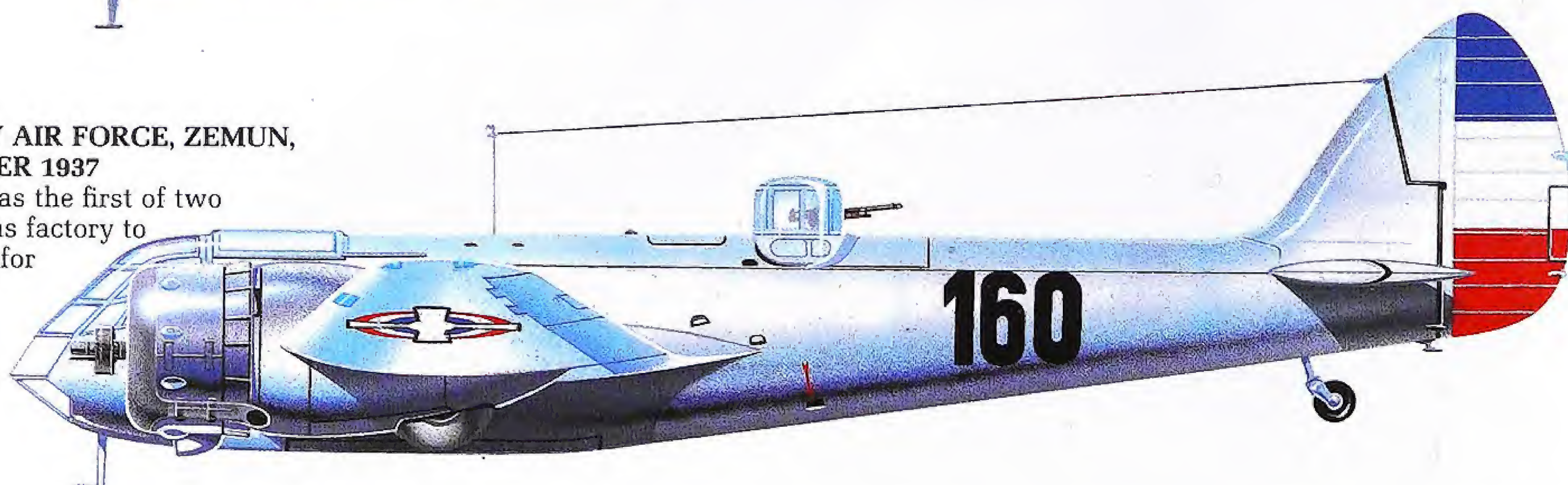
Mk I, ROMANIAN SQUADRON 1/3, EASTERN FRONT, AUGUST 1944

The survivors of 13 UK-built aircraft supplied in November 1939 were operating against the Russians in late 1944 as part of Luftwaffe Air Fleet 4 in the Black Sea area. Yellow fuselage band and wingtips denote the war theater, while 37 is probably the individual aircraft number.



BLENHEIM I, YUGOSLAV AIR FORCE, ZEMUN, YUGOSLAVIA, NOVEMBER 1937

Registered G-AFCE this was the first of two aircraft ferried to the Ikarus factory to serve as pattern machines for future production. Some 40 Blenheims were completed before the German invasion.

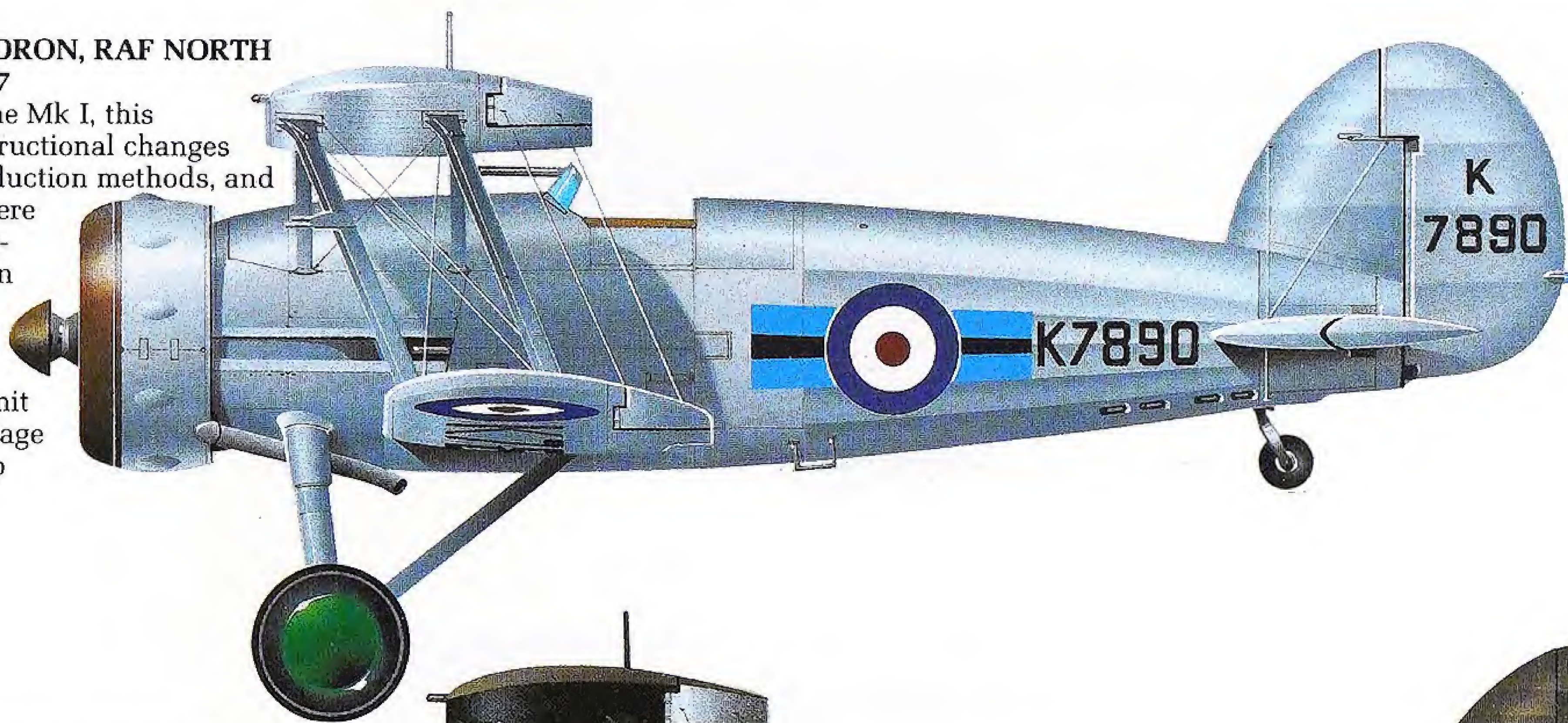


GLOSTER GAUNTLET

Still influenced by the scouts of World War I, the RAF continued to fly open-cockpit fighters until the late 1930s, the last being the sprightly Gauntlet. This was designed to an Air Ministry specification issued in 1926, but it was not until May 1935 that the type entered RAF service, having been developed through a series of prototypes using a variety of engines. Powered by a Bristol Mercury, the Gauntlet could reach 230mph, making it the fastest fighter in RAF service between 1935 and 1937. Production totaled 228.

Mk II, 151 SQUADRON, RAF NORTH WEALD, UK, 1937

Compared with the Mk I, this version had constructional changes to rationalize production methods, and some machines were fitted with a three-bladed propeller in place of the more usual two-bladed wooden type. All-over silver with unit markings on fuselage and across the top wing between the roundels.



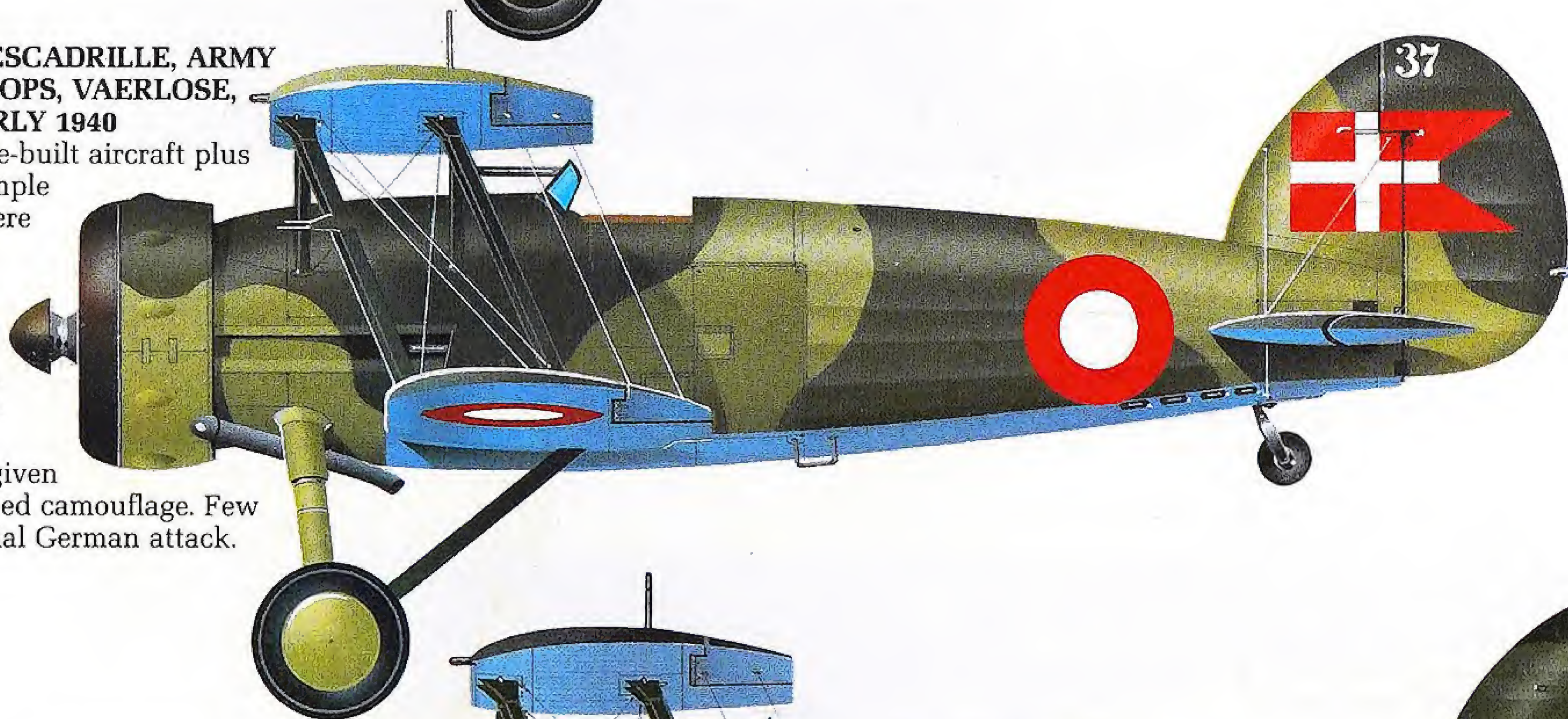
Mk II, 17 SQUADRON, RAF KENLEY, UK, 1938

Based at one of the defensive airfields positioned around London, this unit along with others at the time was instructed to apply a Dark Green/Dark Earth camouflage over the top surfaces of its aircraft. Codes were Medium Sea Gray and roundels were Type B converted from 25in Type A.



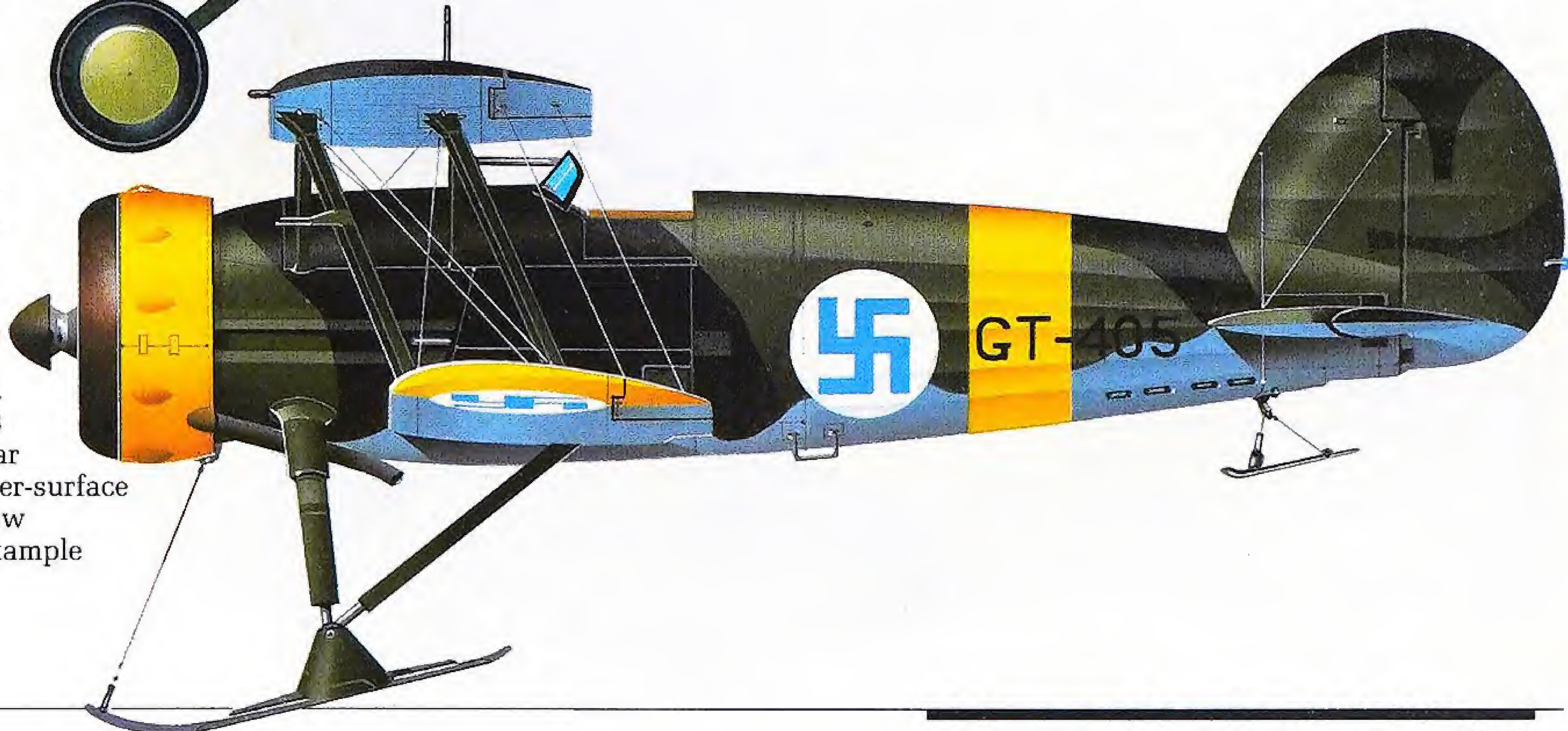
GAUNTLET, 1 ESCADRILLE, ARMY AVIATION TROOPS, VAERLOSE, DENMARK, EARLY 1940

Seventeen license-built aircraft plus one pattern example from Glosters were acquired by the Danish air arm, entering service in 1938. Prior to the brief defense of the country in April 1940, the Gauntlets were given this hastily applied camouflage. Few survived the initial German attack.



Mk II, T/LeLv 35, FINNISH AIR FORCE, KAUHAVA, FINLAND, SPRING 1942

South Africa donated 24 examples to Finland via the UK, these being used as fighter-trainers between 1940 and 1945. They were coded GT-395 to -418 and during the Continuation War carried the black and green upper-surface camouflage seen here, with yellow Eastern Front markings. This example is ski-equipped for winter use.



DOUGLAS DC-3

Unlikely ever to be deprived of its unofficial title, "The greatest transport aircraft ever made", the DC-3 or C-47 or Dakota or Skytrain or whatever other names it went by, has been the logistical backbone of most of the world's air arms at one time or another over the past 50 years. In 1988 there were still more than 300 in airline use, 53 years since the first Douglas Sleeper Transport first took to the air. US production totaled 10,655, the Japanese built a further 485, while Soviet lines are believed to have turned out nearly 3000.

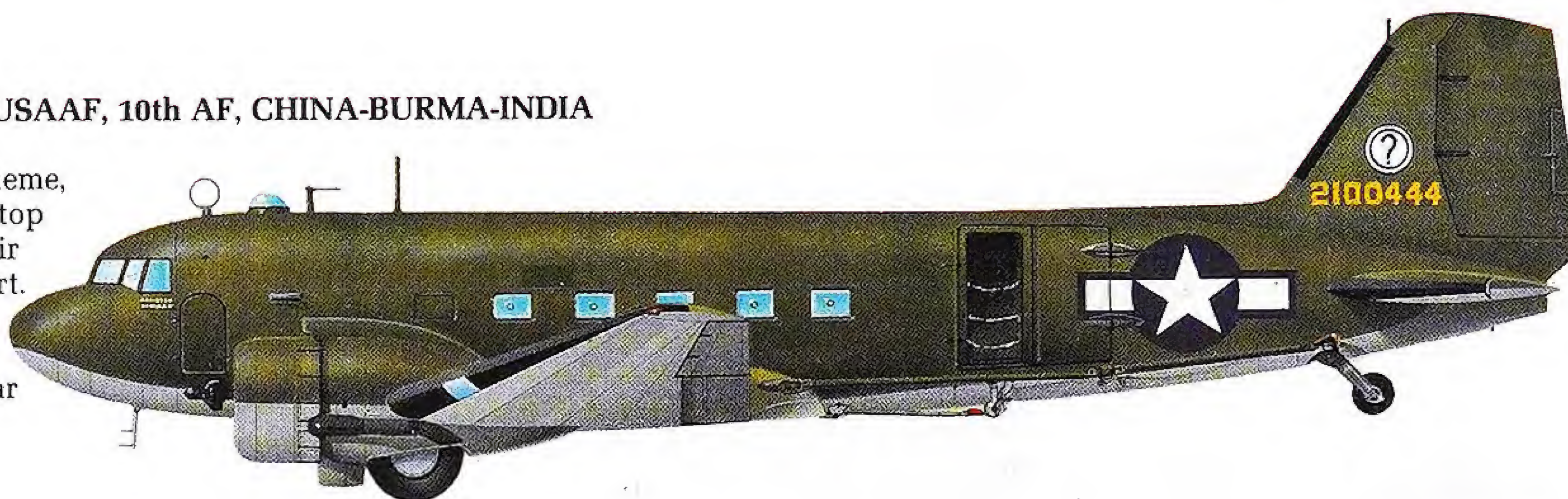
DC-3, KLM (ROYAL DUTCH AIRLINES), SCHIPHOL, NETHERLANDS, SEPTEMBER 1939

Clearly marked with the country name on both sides of the fuselage roof, PH-ASK "Kemphaan" endeavored to ensure unviolated passage around northern Europe in the months before Holland fell to the Germans. It was eventually captured by the Luftwaffe in Norway.



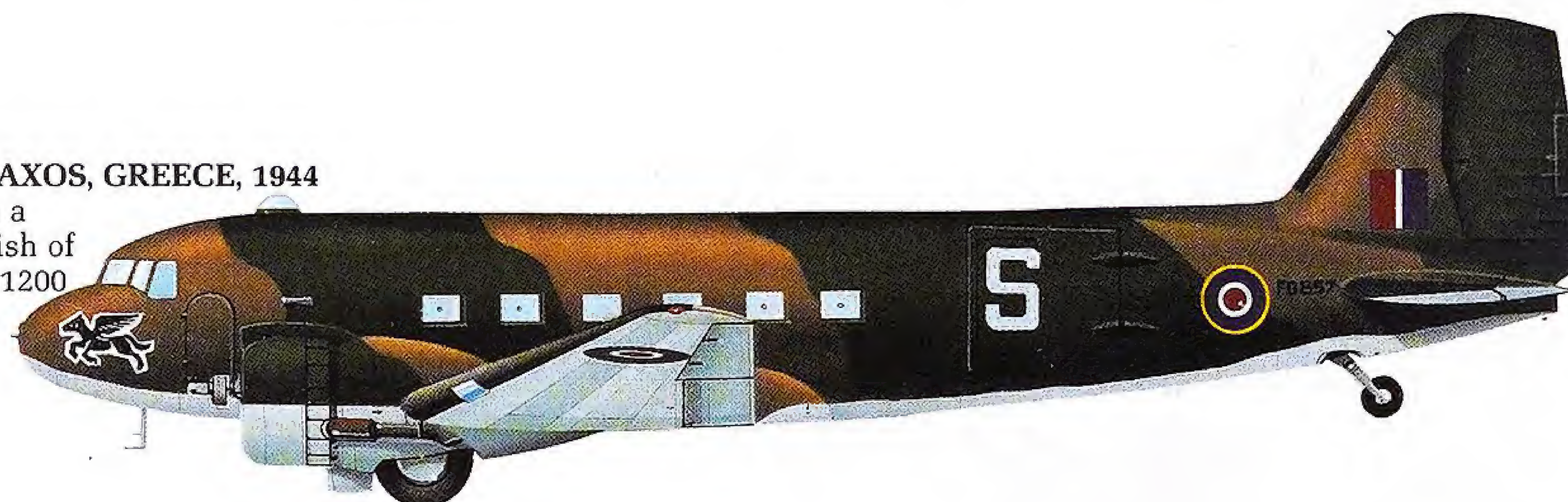
C-47A-65-DL, FIRST AIR COMMANDO, USAAF, 10th AF, CHINA-BURMA-INDIA THEATER, 1944-5

Olive Drab and Neutral Gray was the scheme, but the finish was often worn from non-stop operations in a part of the world where air transport was vital to the Allies' war effort. This was one of 13 aircraft in the First Air Commando Force, and later received five diagonal white stripes around the rear fuselage.



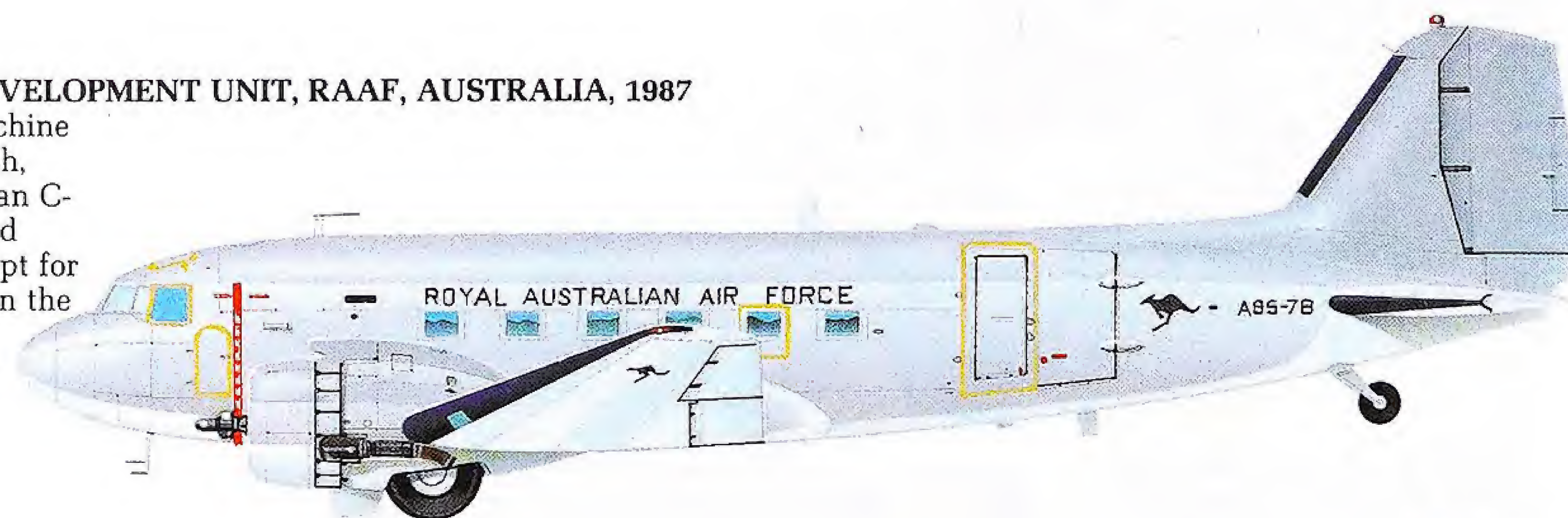
DAKOTA III, 267 SQUADRON, RAF, ARAXOS, GREECE, 1944

An indeterminate scheme of browns with a light blue underside is the interpreted finish of FD857, alias C-47 c/n 9325. Of more than 1200 Dakotas supplied to the RAF under Lend-Lease, about 950 were of the Mk III version. 25 RAF squadrons flew Dakotas during the war.



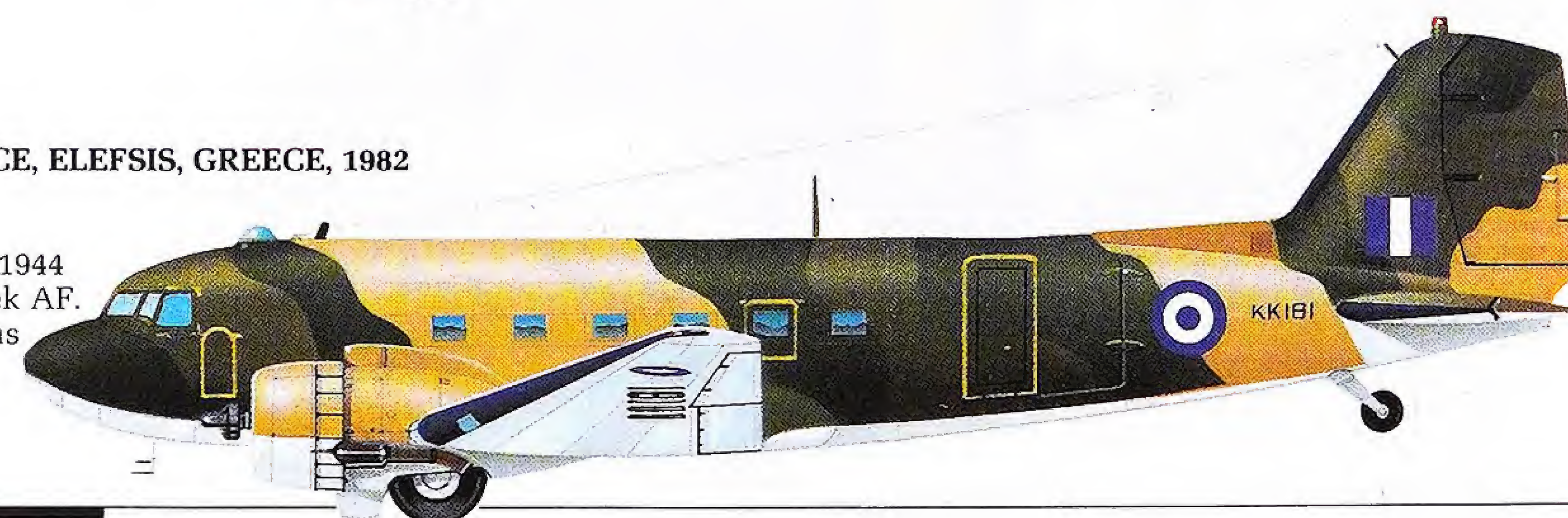
C-47B, AIRCRAFT RESEARCH AND DEVELOPMENT UNIT, RAAF, AUSTRALIA, 1987

Unusual for such an old aircraft, this machine carries the latest air-superiority gray finish, but purely for display purposes. Australian C-47s were serialized A65-1 to 124 and all had been disposed of by the early 1980s, except for two with the ARDU. Note the red band on the side of the fuselage by the crew entry door, which indicated the position of the propeller when the engine was running.



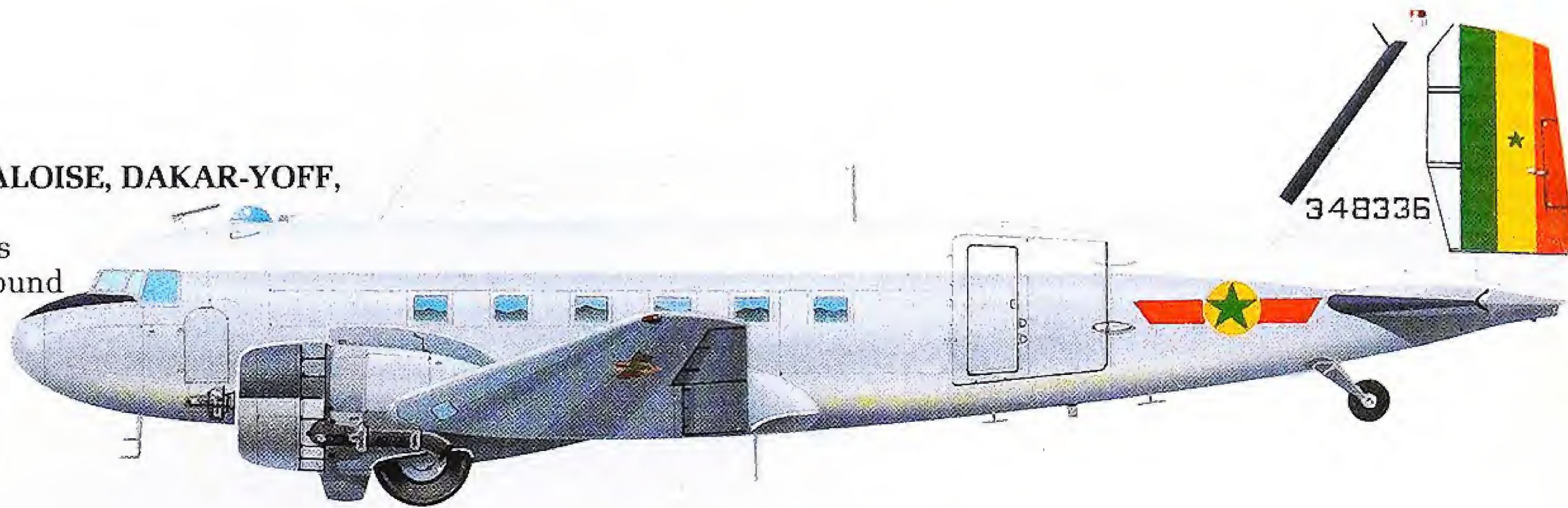
C-47B, 112 WING, HELLENIC AIR FORCE, ELEFSIS, GREECE, 1982

The serial number KK181 identifies this Dakota IV as one of a batch of C-47Bs supplied to the RAF under Lend-Lease in 1944 and subsequently transferred to the Greek AF. At least 76 C-47s were operated at various times by the Greeks, many retaining the previous operator's serial number.



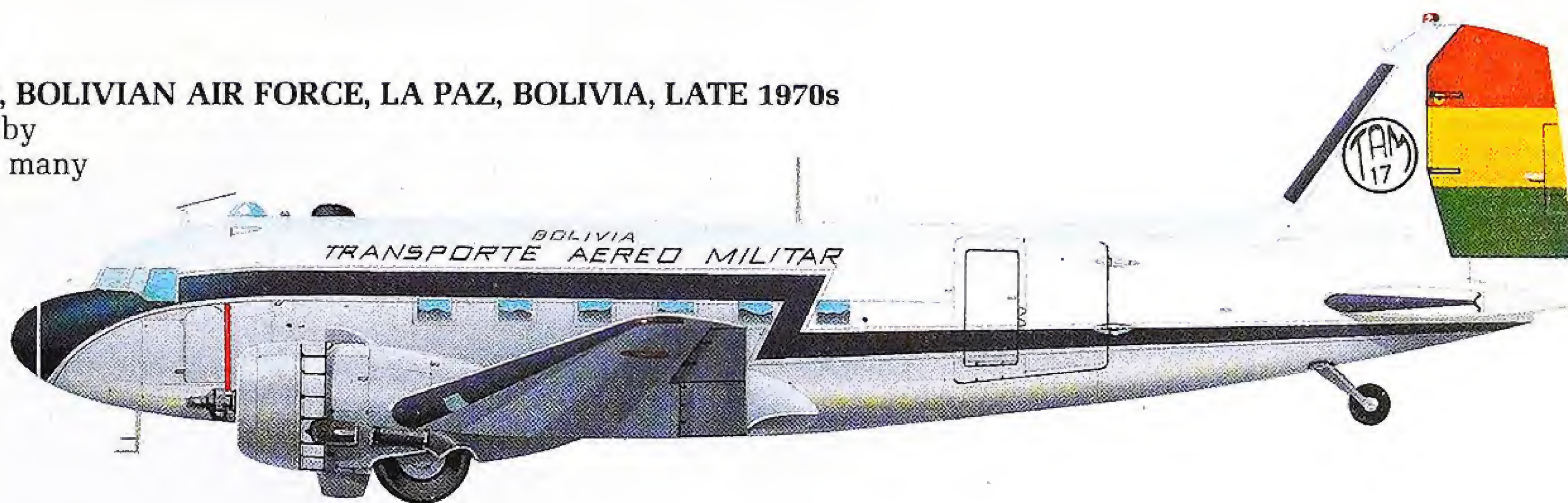
C-47B, 1 GROUPE D'AVIATION SÉNÉGALOISE, DAKAR-YOFF, SÉNÉGAL, 1982

Since 1945 hundreds of war-surplus C-47s have passed from operator to operator around the world. This example was originally a Lend-Lease aircraft with the RAF as a Dakota IV KJ813. It then went to the French AF, who later gave it to Sénégal to establish a small embryonic air arm.



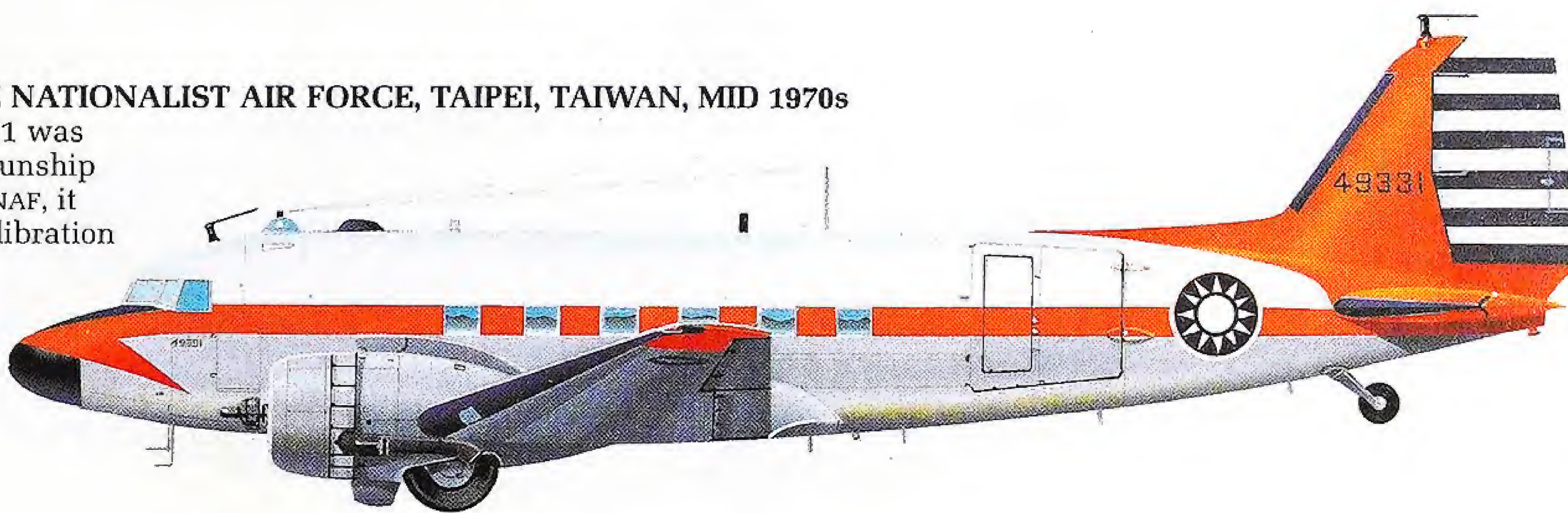
C-47B, TRANSPORTE AEREO MILITAR, BOLIVIAN AIR FORCE, LA PAZ, BOLIVIA, LATE 1970s

Central and South America have, almost by tradition, been the last operating area for many old and obsolete aircraft, and DC-3s still abound with many small freight and passenger companies. TAM is one of the military "airlines" run by the air forces in the subcontinent.



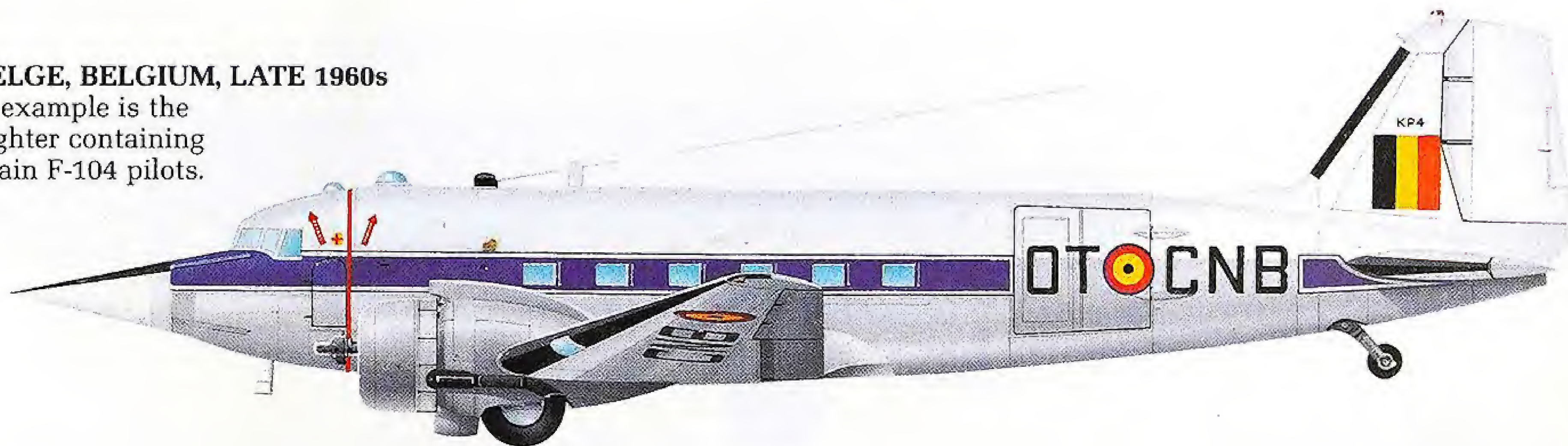
C-47, CALIBRATION UNIT, CHINESE NATIONALIST AIR FORCE, TAIPEI, TAIWAN, MID 1970s

Originally built as a transport, 43-49331 was converted by the USAF into an AC-47 gunship for use in Vietnam. Acquired by the CNAF, it was changed again into an airways calibration aircraft.



2C-47, FORCE AÉRIENNE BELGE, BELGIUM, LATE 1960s

Grafted on to the nose of this example is the nose-cone of an F-104G Starfighter containing the radar and electronics to train F-104 pilots.



TRI-TURBO 3, USA, EARLY 1970s

The US company Conroy developed this triple-engined DC-3 powered by three Pratt & Whitney PT6A-45 turboprops, promoting it for maritime patrol duties. In spite of its brighter performance there were no takers.



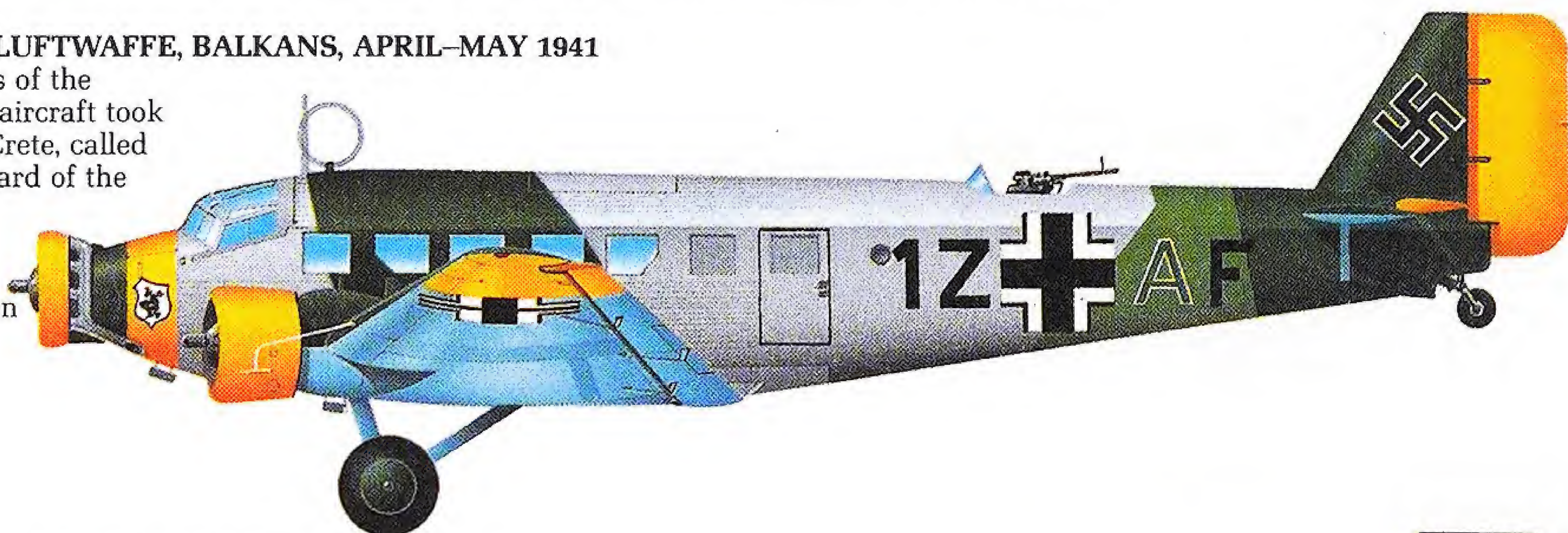
JUNKERS

Ju 52

Probably unfairly judged as outmoded at the beginning of the Second World War, Junkers' all-metal Ju 52 served the Luftwaffe well throughout the conflict, flying in all theaters and proving to be docile and undemanding to its crews. First flown in 1932, it entered military service in 1933 and no less than 230 were eventually registered to the German airline Lufthansa. During World War II it took part in all the major operations, including Crete, Stalingrad and the Kuban Peninsular. More than 5000 were built, including at least 500 in France and Spain.

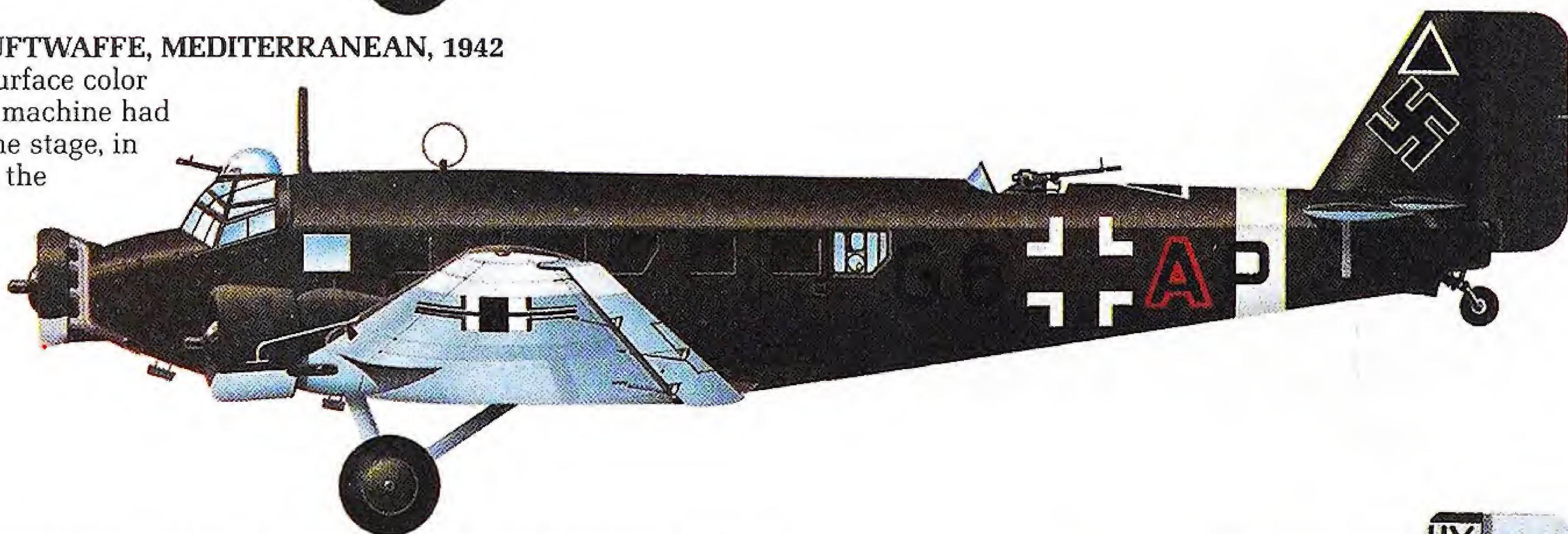
Ju 52/3MG4e, Stab IV/KGzbV 1, LUFTWAFFE, BALKANS, APRIL–MAY 1941

Wearing the yellow theater colors of the southern area of operations, this aircraft took part in the airborne invasion of Crete, called by Gen Kurt Student "the graveyard of the German paratrooper" owing to the high losses sustained. The letters KGzbV stand for Kampfgeschwader zur besonderen Verwendung (Battle Group for Special Duties).



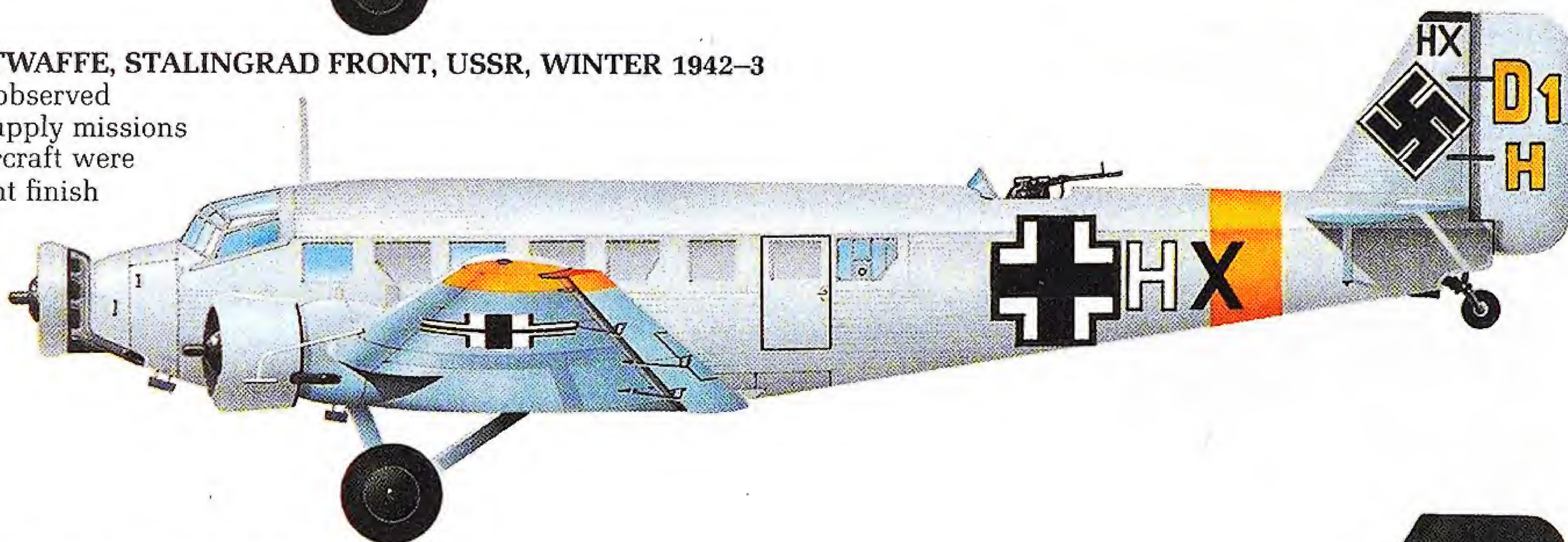
Ju 52/3mg6e, 2/KGrzbV 102, LUFTWAFFE, MEDITERRANEAN, 1942

Wearing an overall green top surface color with Hellblau underneath, this machine had probably been repainted at some stage, in view of the absence of black in the fuselage cross. Hundreds were employed on supplying Rommel's Afrika Korps using the hazardous route across the Med. from Sicily.



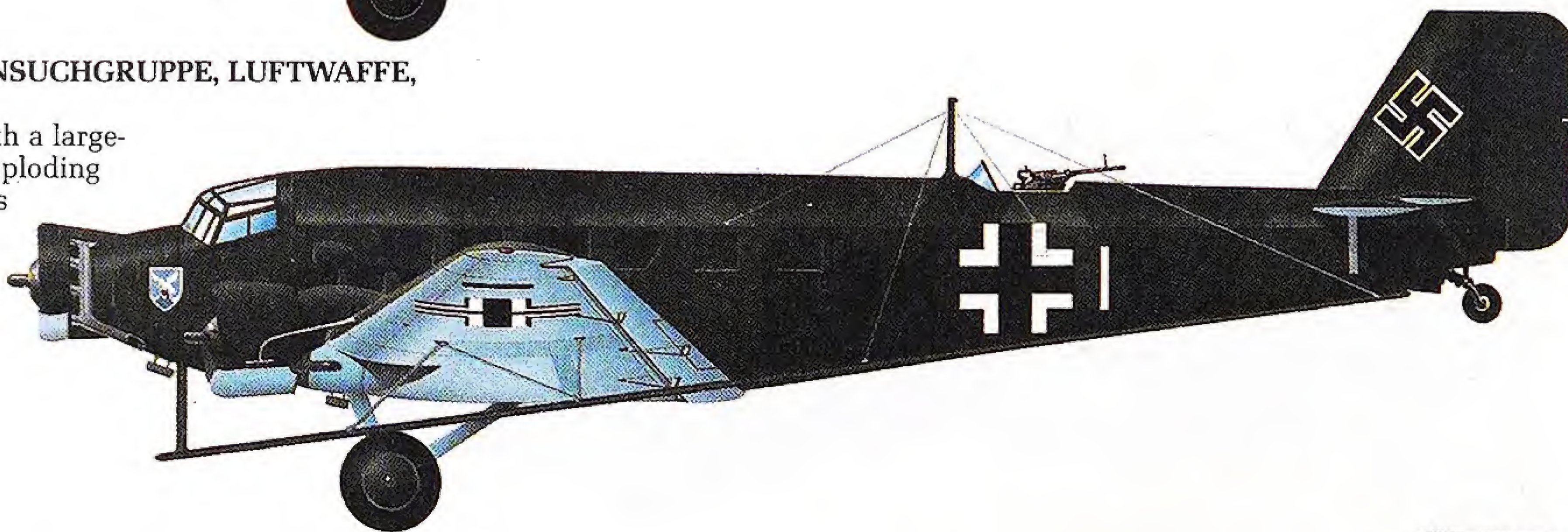
Ju 52/3mg6e, IV/KGzbV 1, LUFTWAFFE, STALINGRAD FRONT, USSR, WINTER 1942–3

To reduce the chances of being observed against the snow when flying supply missions to the beleaguered 6th Army, aircraft were given a white water-soluble paint finish over the upper surfaces. A dark green surround has been left around the fuselage cross and swastika marking. On the rudder is a tactical code (D1H).



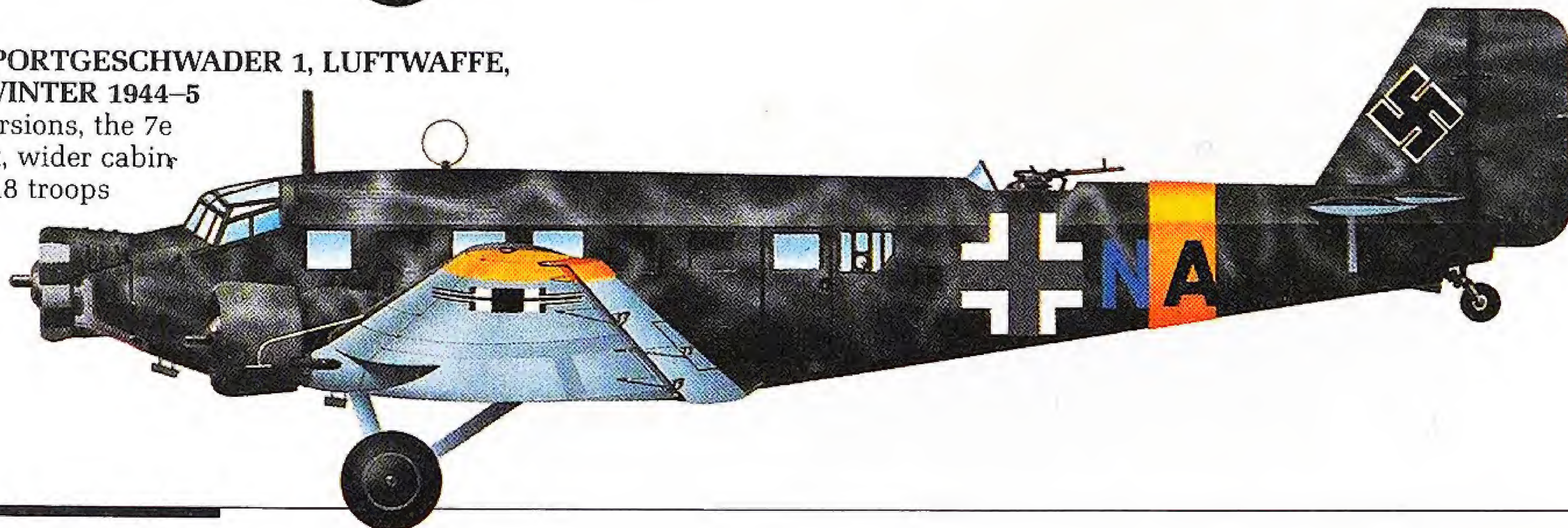
Ju 52/3mg6e (MS), STAB/MINENSUCHGRUPPE, LUFTWAFFE, MALMI, FINLAND, 1943–4

One of several aircraft fitted with a large-diameter duralumin hoop for exploding magnetic mines. This machine is finished in the standard Dunkelgrün (dark green) and Schwarzgrün (black-green) splinter pattern; it has the unit badge on the nose.



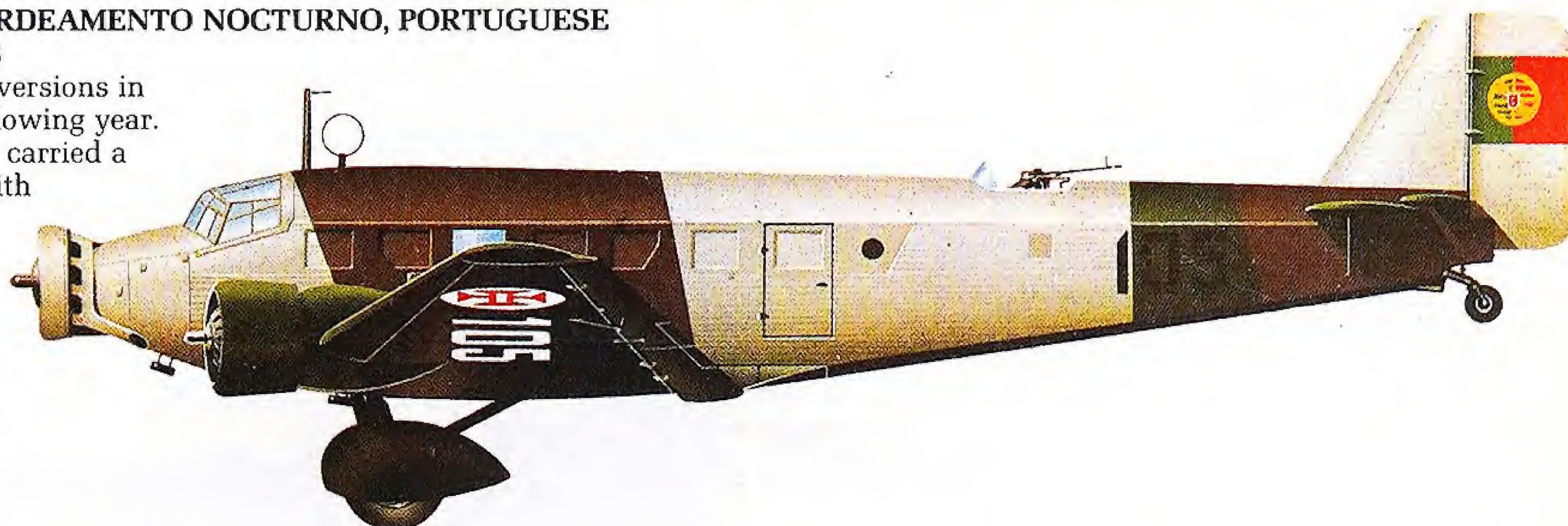
Ju 52/3mg7e, STAB IV/TRANSPORTGESCHWADER 1, LUFTWAFFE, COURLAND FRONT, USSR, WINTER 1944–5

One of the major production versions, the 7e incorporated an automatic pilot, wider cabin doors and accommodation for 18 troops or 12 stretcher cases. A light random spray of gray has been applied over the original green finish and the unit code (1Z) has been reduced in size.



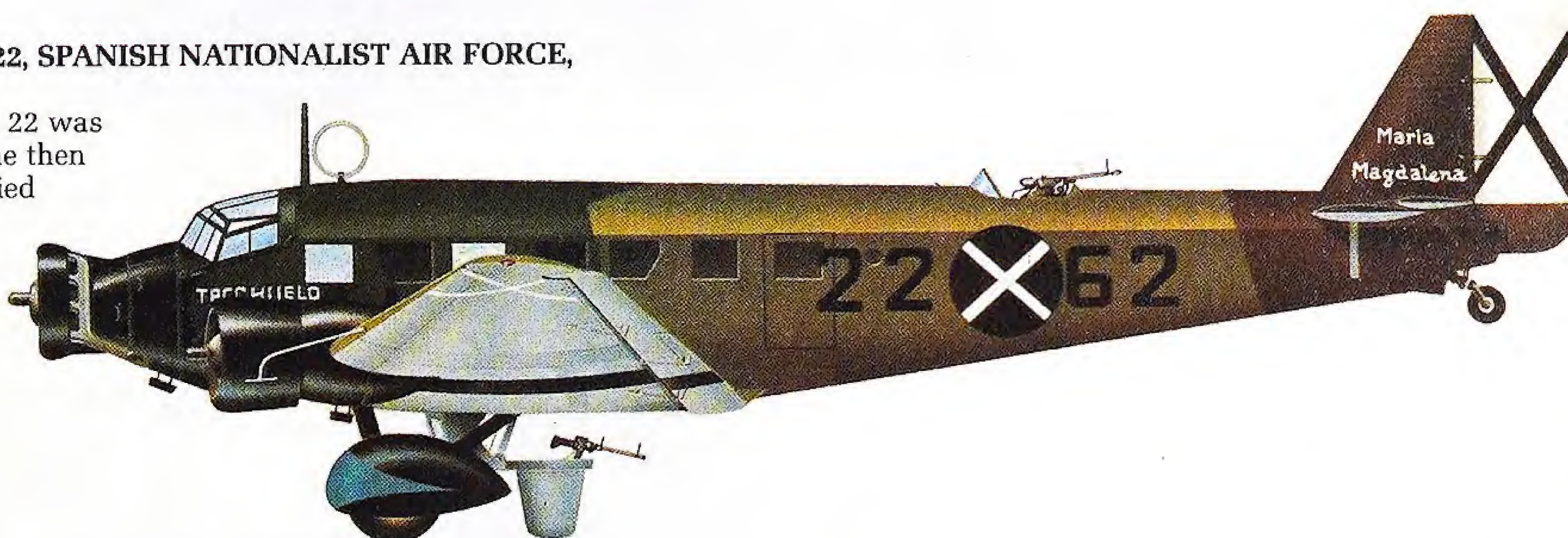
Ju 52/3mg3e, GRUPO DE BOMBARDEAMENTO NOCTURNO, PORTUGUESE ARMA DA AERONAUTICA, 1938

Portugal ordered 10 Ju 52 bomber versions in 1937, these being delivered the following year. They were serialized 101 to 110 and carried a green/gray/brown paint scheme with black undersides. The aircraft were later converted into transports and, together with some ex-Luftwaffe examples sold to Portugal by Norway after the war. They remained in use into the 1960s.



Ju 52/3mg4e, ESCUADRILLA 2-E-22, SPANISH NATIONALIST AIR FORCE, SPAIN, SUMMER 1937

In the Nationalist's coding system, 22 was allocated to the Ju 52, each machine then having its individual number applied on the other side of the insignia. "Maria Magdalena" was a bomber and here has the ventral gunner's "dustbin" lowered.



Ju 52/3mg3e, KAMPFGRUPPE 88, LEGION CONDOR, SPAIN, LATE 1936

Three 12-aircraft Staffeln of Ju 52 bombers arrived in Spain toward the end of 1936 and operated alongside similar aircraft supplied to Franco by Germany in the summer. Color was a pale green-gray, probably Grau 63.



Ju 52/3mg4e, GRUPO de BOMBARDEO NOCTURNO 1-G-22, NATIONALIST AIR ARM, SPRING 1938

One of two Nationalist night-bomber units with Ju 52s, 1-G-22 was formed with aircraft of both Spanish and Legion Condor origins. The unit number stood for the 1st Grupo with the Type 22 (Ju 52) aircraft.



Ju 52/3mg4e, GRUPO DE BOMBARDEO NOCTURNO 2-G-22, NATIONALIST AIR ARM, SPRING 1938

An aircraft of the other night-bomber unit, but with a different segmented camouflage and the dark blue cross moved farther along the fuselage. Note the tail skid on this machine compared with the tailwheel on the 1-G-22 aircraft.

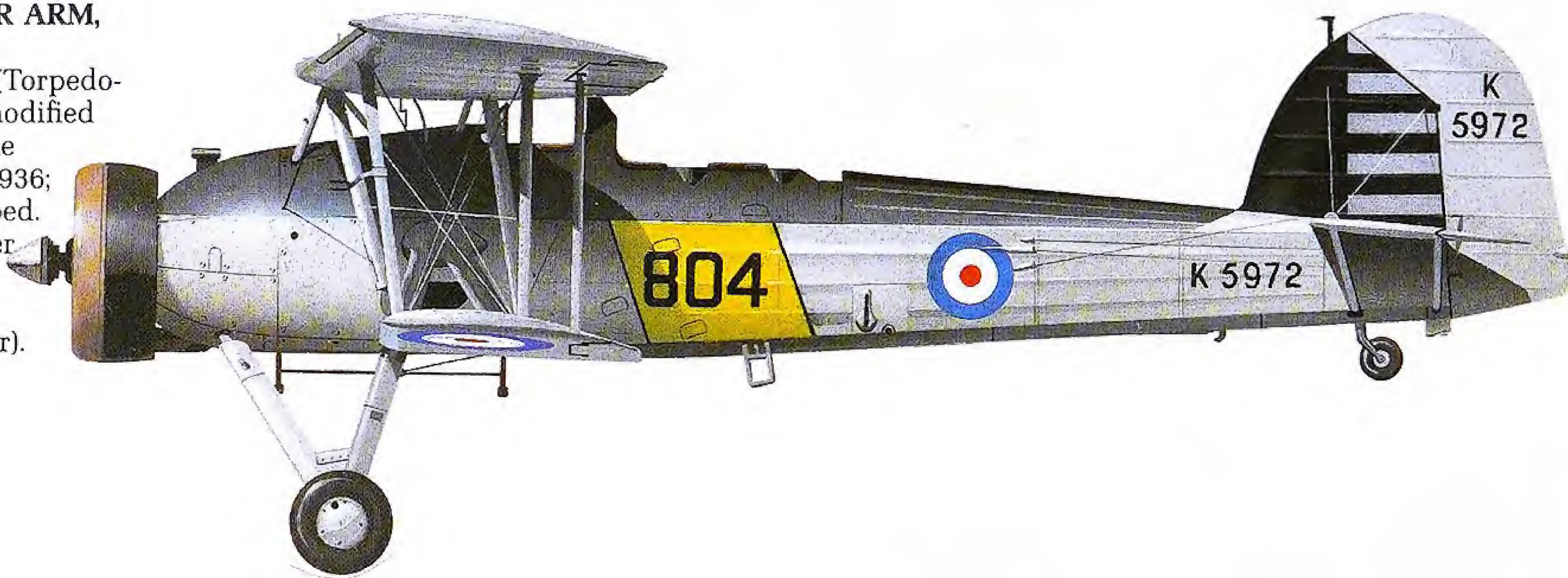


FAIREY SWORDFISH

Unlike other aircraft that were clearly obsolete at the beginning of World War II, the Swordfish was not withdrawn from service (it probably would have been had there been a replacement). As it turned out, this venerable biplane torpedo-bomber earned glory for itself and the Royal Navy, winning battle honors which eluded more modern carrier-based aircraft. Among its most famous was the crippling of the Italian Fleet at Taranto, the torpedoing of the *Bismarck*, and the attacks on the German battleships engaged in the "Channel Dash" in February 1942. Production totaled 2391.

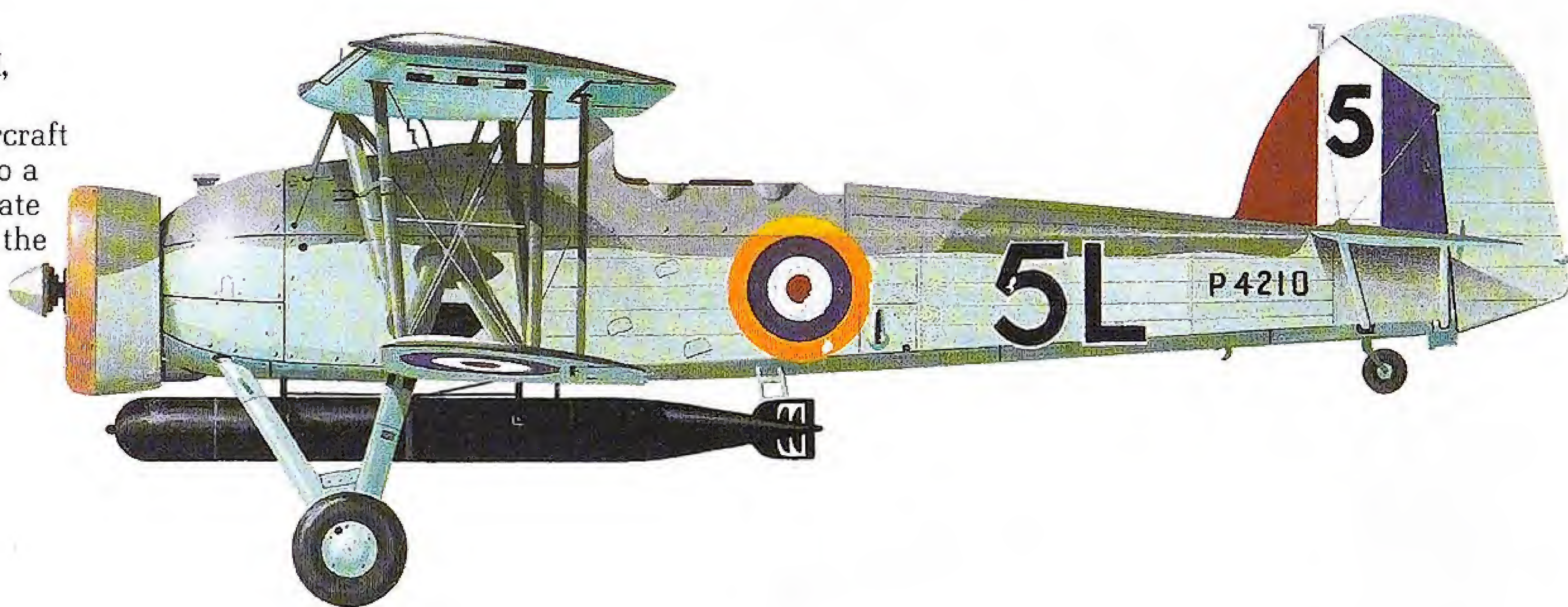
Mk I, 823 SQUADRON, FLEET AIR ARM, HMS *GLORIOUS*, 1936

Developed initially from the TSR I (Torpedo-Spotter-Reconnaissance) and the modified TSR II which flew in April 1934, the Swordfish entered service in July 1936; by 1939 13 squadrons were equipped. Early aircraft were finished in silver overall with a color/number code on the fuselage side (yellow for *Glorious*, 804 call sign code number). Black fuselage decking and fin.



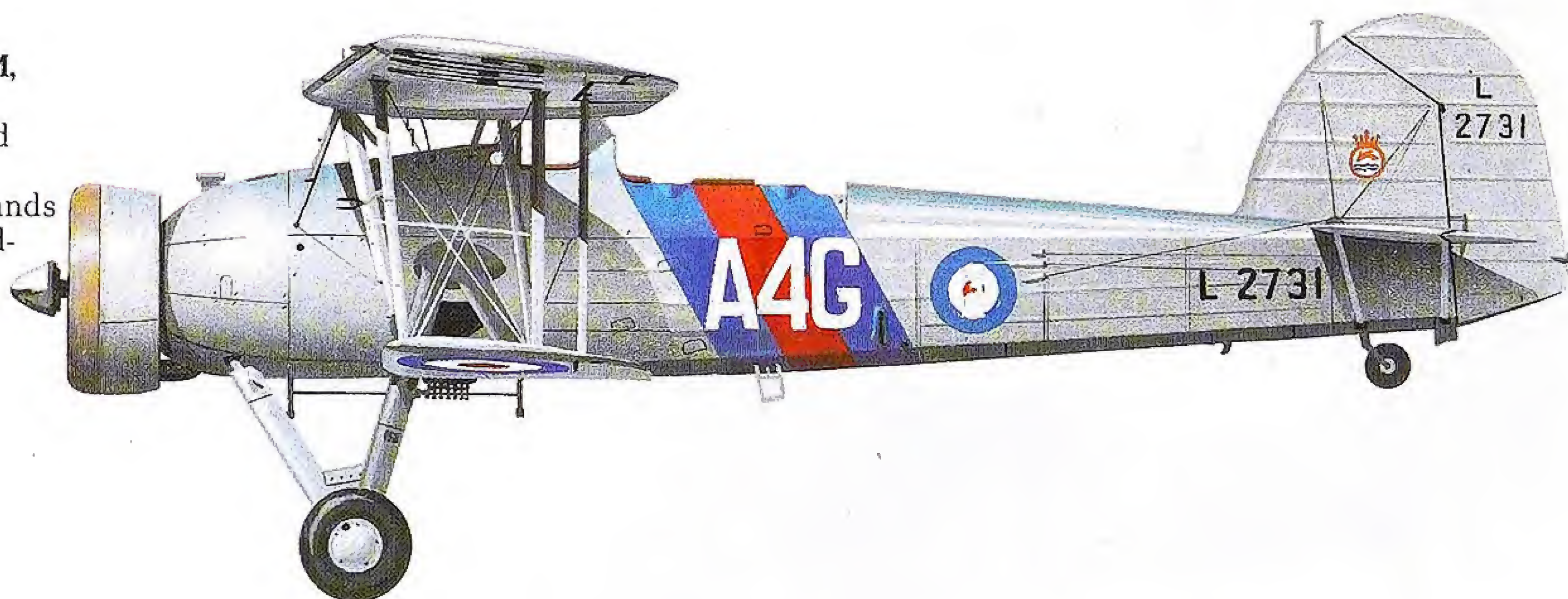
Mk I, 821 SQUADRON, FLEET AIR ARM, HMS *ARK ROYAL*, 1940

Early war markings on a carrier-based aircraft with Sky color undersides extending up to a line along the fuselage to meet the temperate gray/green pattern which was painted on the top surfaces. Eight inch serial and large figure/letter code indicate a carrier-based aircraft.



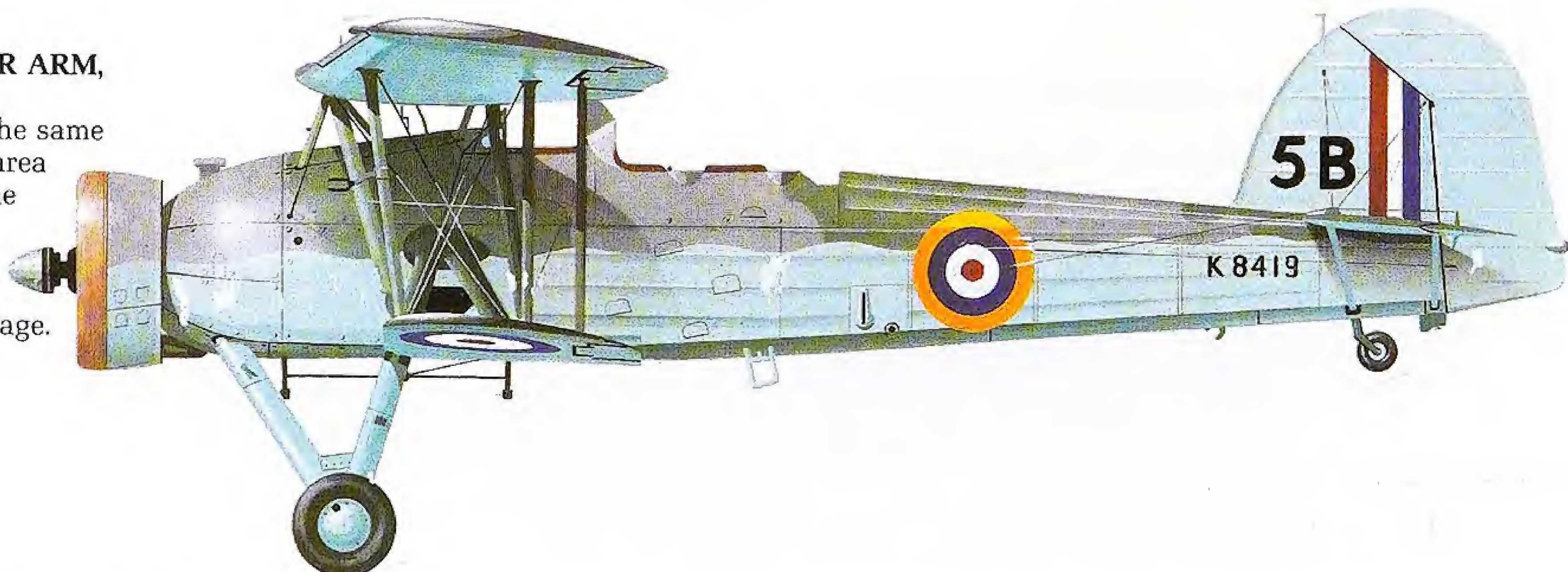
Mk I, 820 SQUADRON, FLEET AIR ARM, HMS *ARK ROYAL*, 1939

An all-silver finished aircraft with revised markings after the style shown on the aircraft at the top of the page. Colored bands indicated the carrier, in this case blue-red-blue for *Ark Royal* and a letter/number/letter (A4G) identifying the carrier, the aircraft's role (torpedo-spotter) and the individual aircraft within its squadron.



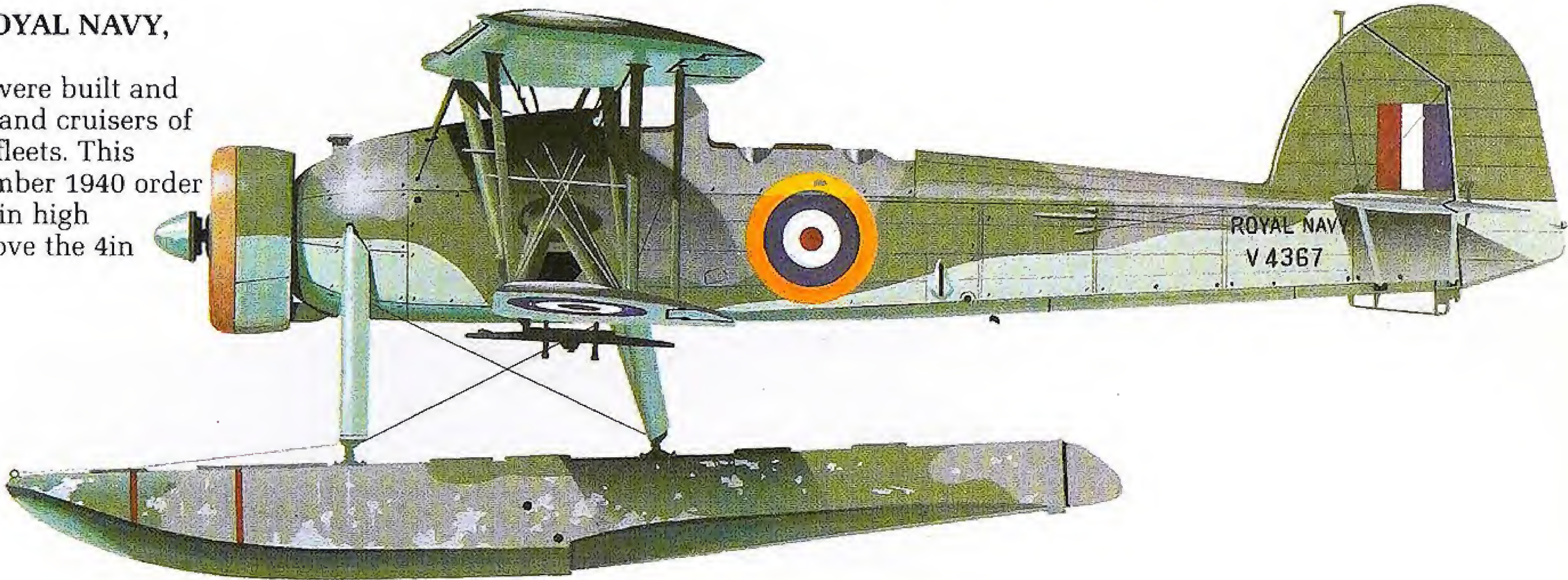
Mk I, 824 SQUADRON, FLEET AIR ARM, HMS *EAGLE*, 1940.

An example of how aircraft with the same colors could differ in terms of the area camouflaged and the position of the markings. Compare this machine with 5L in View No. 2. About the only item to maintain continuity is the serial number on the rear fuselage.



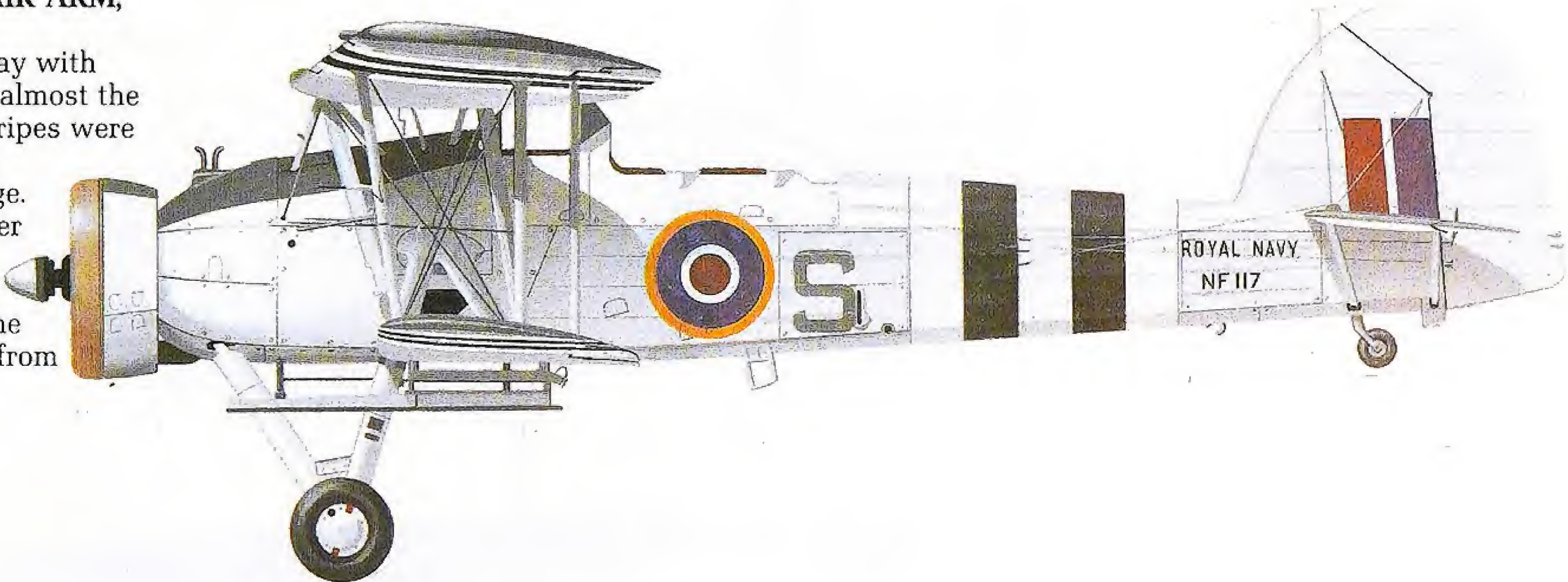
Mk I, CATAPULT FLIGHT, ROYAL NAVY, HMS MALAYA, 1940

About 70 floatplane versions were built and operated from the battleships and cruisers of the Home and Mediterranean fleets. This aircraft incorporates the December 1940 order to apply "ROYAL NAVY" in 4in high letters on the rear fuselage above the 4in high serial V4367.



Mk II, 811 SQUADRON, FLEET AIR ARM, HMS BITER, LATE 1944

Dark Slate Gray and Dark Sea Gray with White undersurfaces extend over almost the whole fuselage. D-Day invasion stripes were applied to top and bottom of both wings and around the rear fuselage. Rocket-firing rails were fitted under lower wing for the anti-shiping/submarine role. Production of the Mk II totaled 1080 and all front-line Swordfish units flew this version from mid-1943 to June 1944.



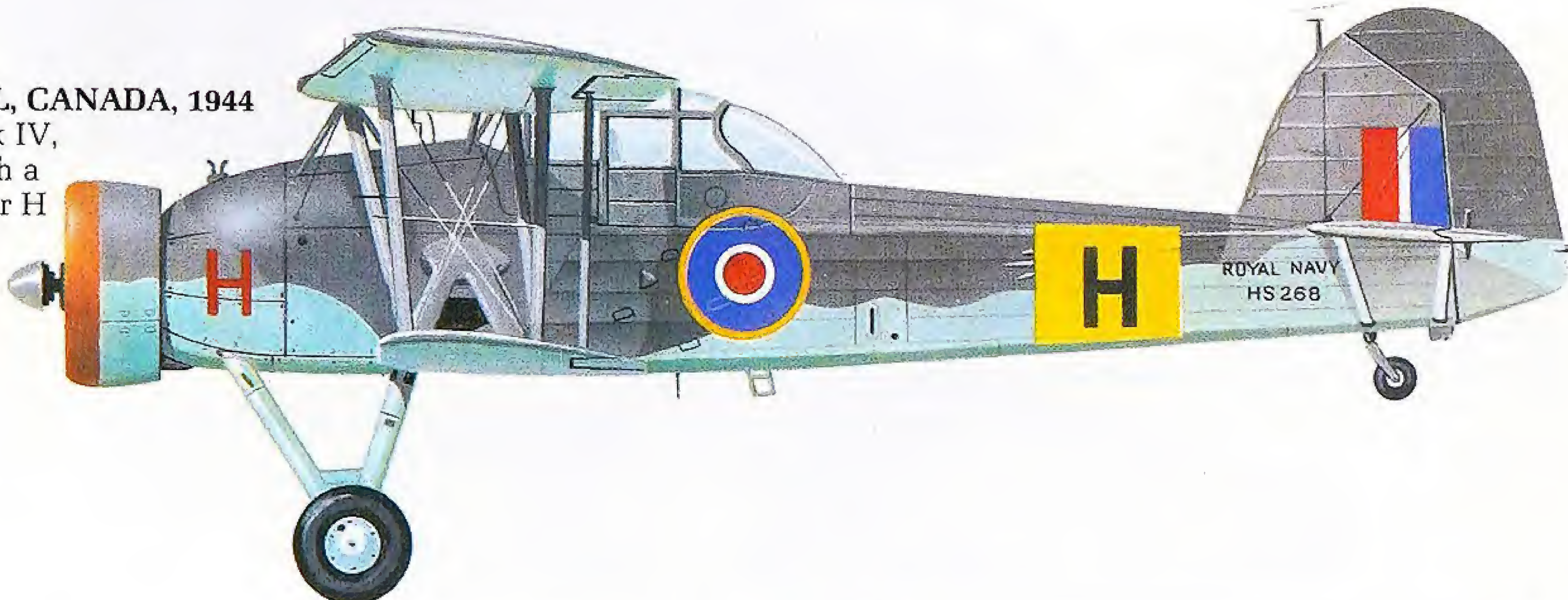
Mk III, 119 SQUADRON, RAF COASTAL COMMAND, KNOKKE-LE-ZOUTE, BELGIUM, 1945

In a sinister all-black finish, these Swordfish were assigned anti-E-boat and anti-midget submarine patrols along the supply lines between the UK and Belgian ports. They were fitted with ASV Mk X radar in place of the torpedo crutches and had aerials attached to the wing struts. This red-coded example (NF410) has a Donald Duck emblem on the fuselage.



Mk II, 1 NAVAL AIR GUNNERY SCHOOL, CANADA, 1944

Sometimes erroneously referred to as a Mk IV, this is in fact a winterized Mk II fitted with a fully enclosed cockpit. The individual letter H in black on a yellow band ensured higher visibility.



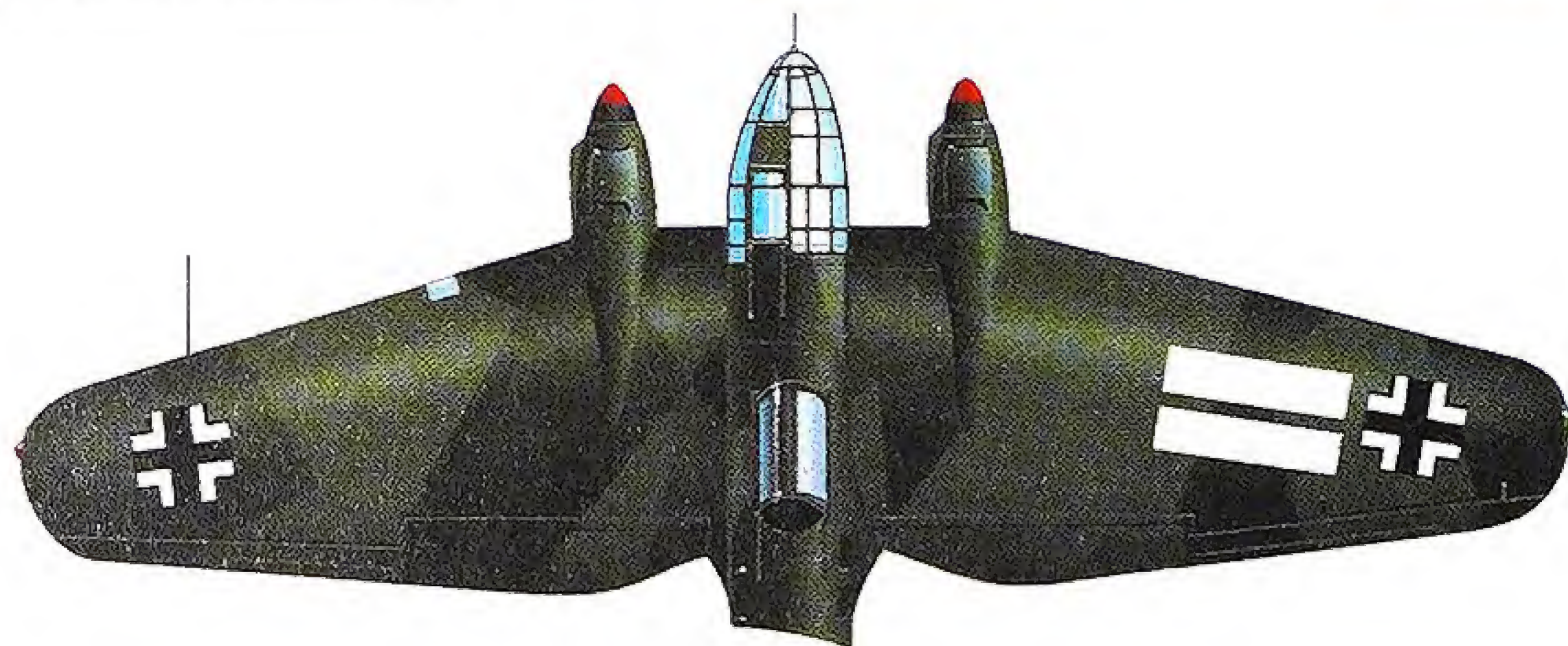
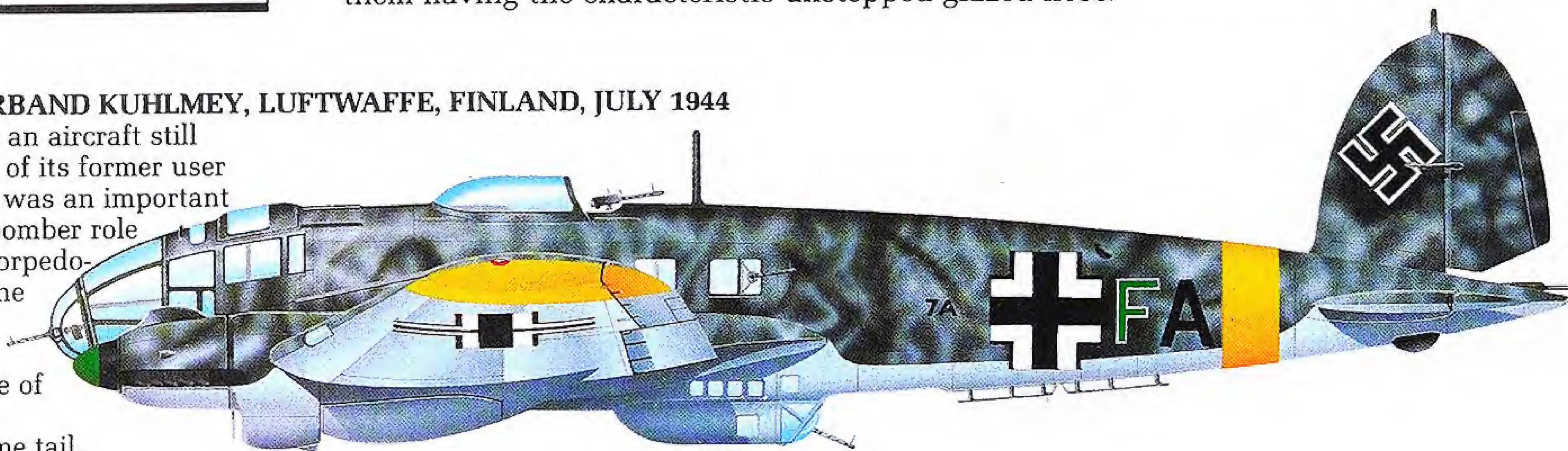
HEINKEL

He 111

The Luftwaffe's standard medium bomber at the time of the Battle of Britain in 1940, the He 111 was vulnerable without fighter protection and it was with relief that the crews were switched from the daylight offensive to night operations. The lack of a suitable replacement resulted in the type soldiering on to the end of the war, 10 years after the prototype flew in 1935. More than 7300 He 111s were built, the majority of them having the characteristic unstepped glazed nose.

He 111H-6, GEFECHTSVERBAND KUHLMEY, LUFTWAFFE, FINLAND, JULY 1944

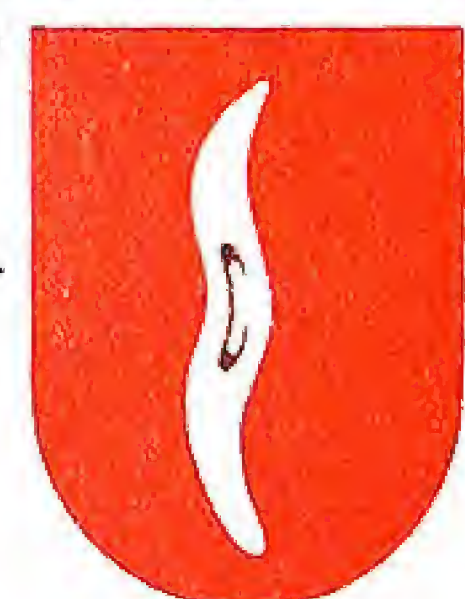
Russian Front markings on an aircraft still carrying the 7A + FA codes of its former user Stab LG 2. The H-6 variant was an important sub-type, operating in the bomber role as well as flying anti-ship torpedo-carrying missions against the Allied supply convoys travelling to Russia from 1942. This machine was one of those armed with a remote-controlled gun in the extreme tail.



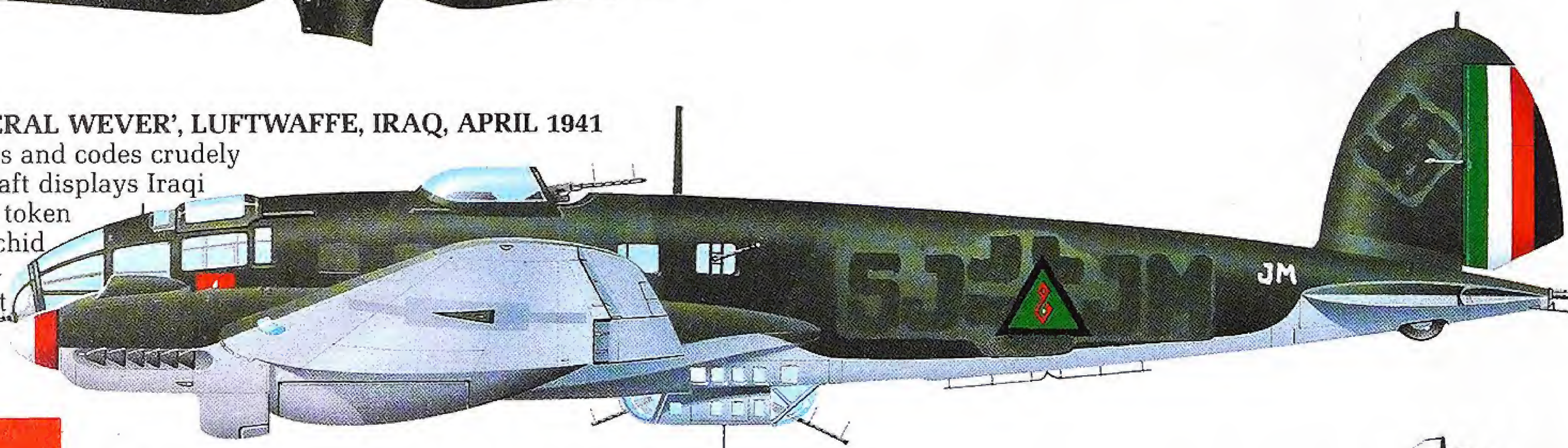
Plan view of an He 111 at the time of the Battle of Britain showing the splinter camouflage and tactical white bars above the starboard wing.

He 111H, KG 4 'GENERAL WEVER', LUFTWAFFE, IRAQ, APRIL 1941

Its Luftwaffe markings and codes crudely painted out, this aircraft displays Iraqi markings as part of a token support force for Raschid Ali, leader of an Axis-inspired revolt against British forces in the country. The unit badge was however retained, as was the German camouflage.

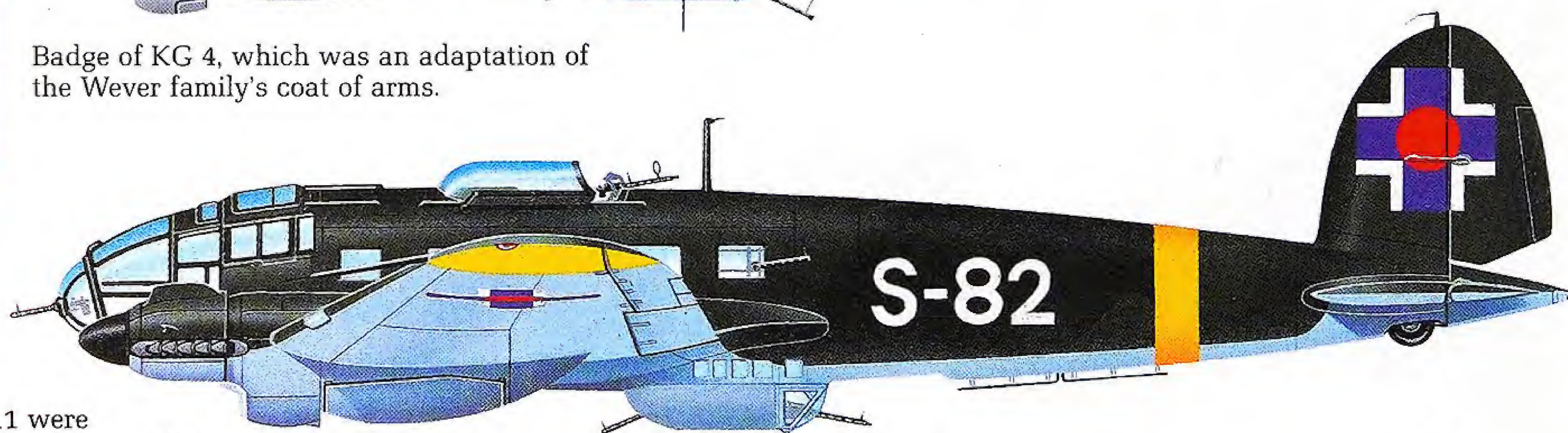


Badge of KG 4, which was an adaptation of the Wever family's coat of arms.



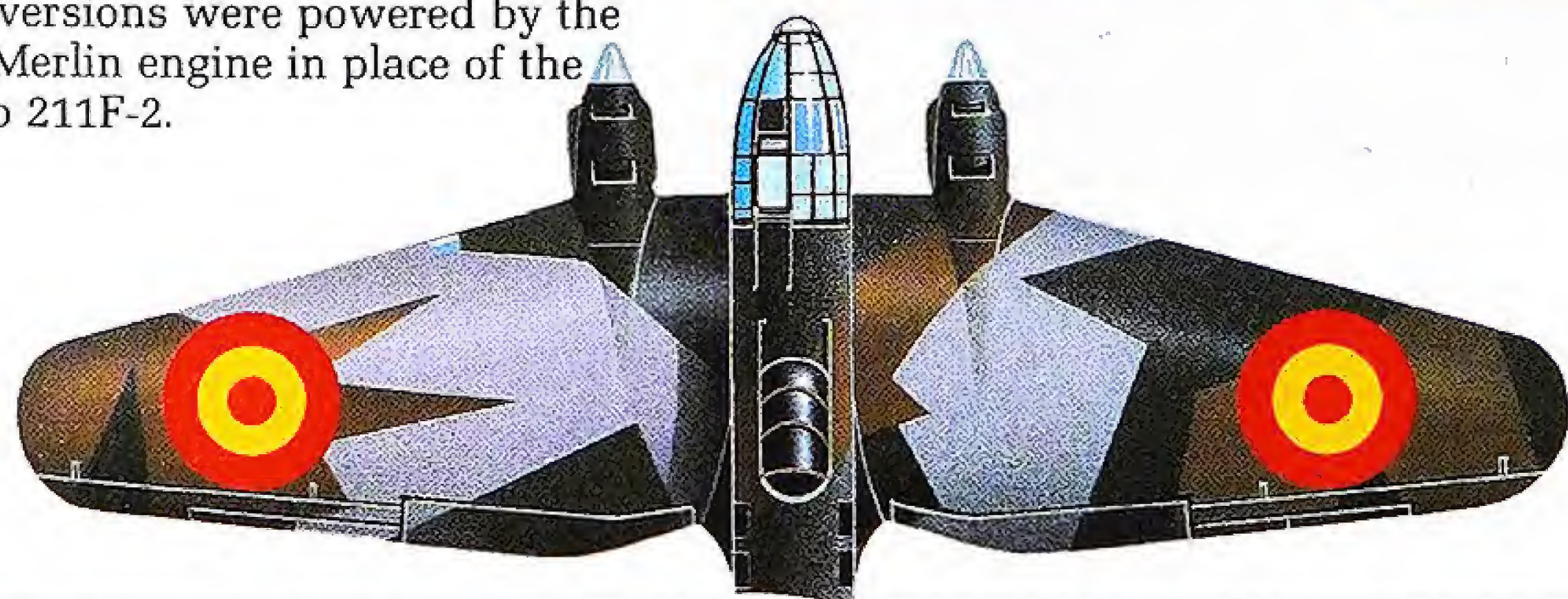
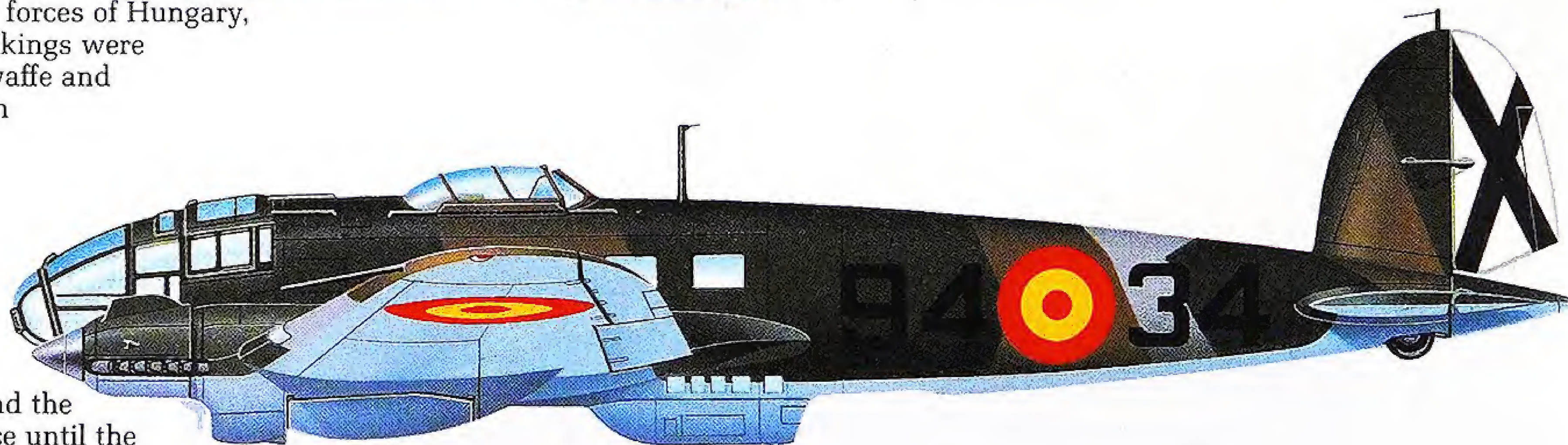
He 111H-3, SLOVAKIAN AIR FORCE, TRENCIN, SPRING 1943

Various models of the He 111 were used by the German satellite air forces of Hungary, Romania and Slovakia. The markings were adapted from those of the Luftwaffe and helped prevent mis-identification during combat.



He 111H-16, ALA 94, SPANISH AIR FORCE, LATE 1950s

CASA in Spain continued to build the C.2111 series of He 111 variants after the war and the type remained in Spanish service until the 1960s. Later versions were powered by the Rolls-Royce Merlin engine in place of the Junkers Jumo 211F-2.



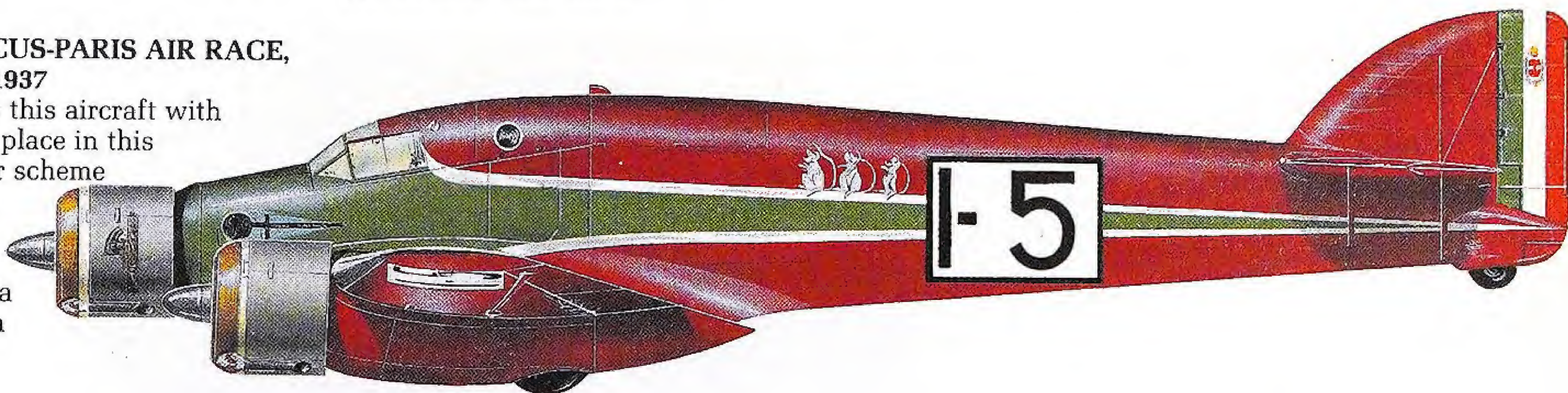
Spanish Air Force camouflage for the top surface of post-war CASA-built Heinkels was of a hard-edged splinter pattern of dark green, brown and gray. The offset nose transparency was designed to enable the pilot in the left-hand side to have an unrestricted view ahead.

SAVOIA-MARCHETTI S.M.79

Though derided by the Allies during World War II, the Italian trimotor Sparviero (Hawk) was one of the Regia Aeronautica's most successful torpedo bomber and reconnaissance aircraft. Well liked by its crews, the aircraft was able to absorb considerable combat damage and remain flying. As a fast airliner, the prototype first flew in 1934. At the beginning of World War II, eleven Bomber Groups were equipped with the S.M.79. The S.M.79-II torpedo carrier and improved-III followed; total production was 1330.

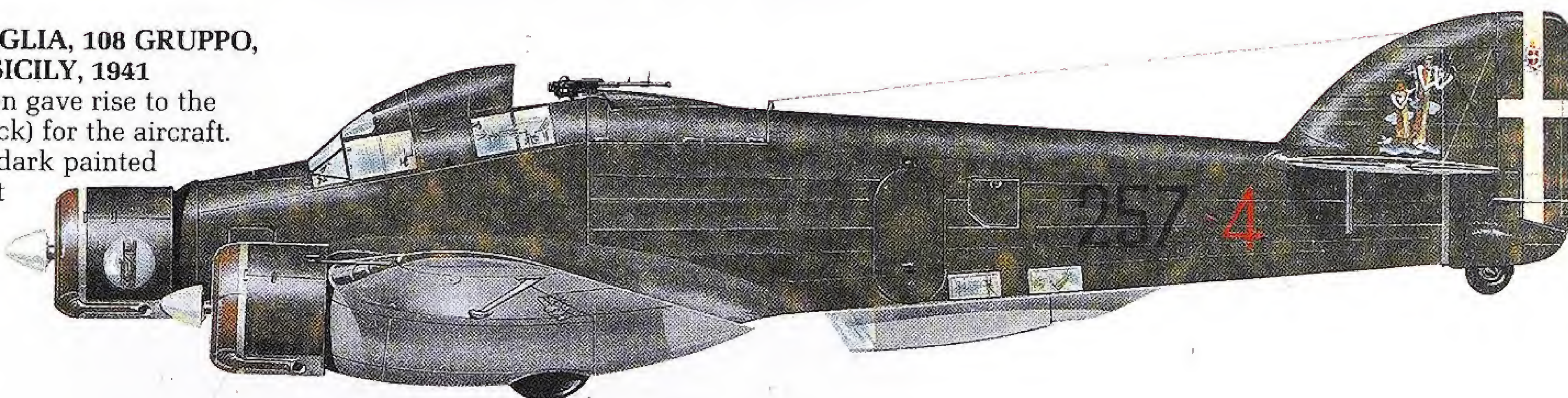
S.M.79C, ISTRES-DAMASCUS-PARIS AIR RACE, REGIA AERONAUTICA, 1937

Mussolini's son Bruno flew this aircraft with Col Attilio Biseo into third place in this prestigious event. The color scheme reflected that of the Italian national flag. Note the three mice by the racing number – an insignia adopted by the Italian team



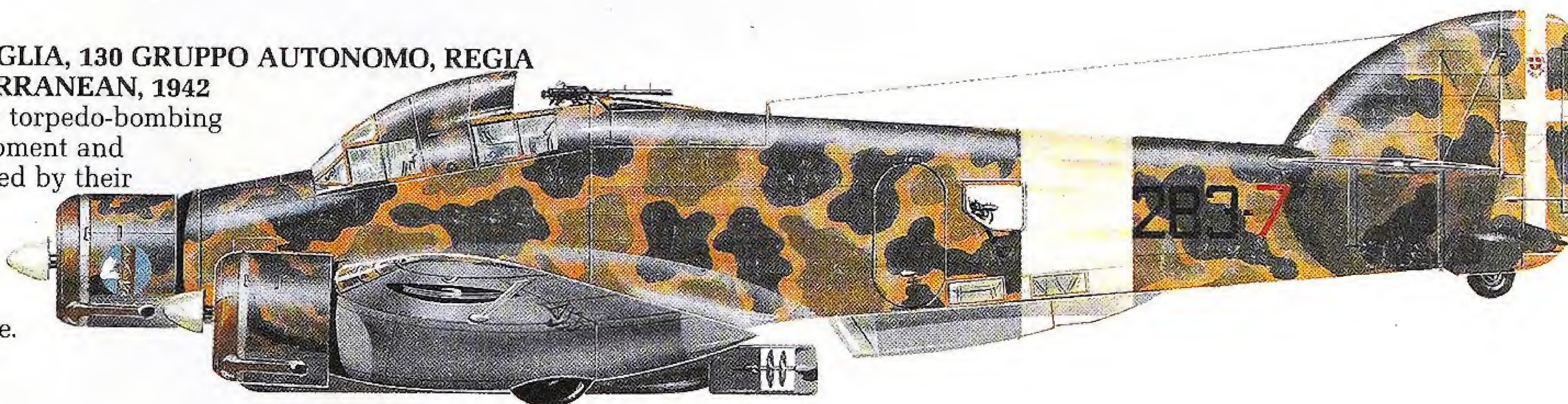
S.M.79/P.XI, 257 SQUADRIGLIA, 108 GRUPPO, REGIA AERONAUTICA, SICILY, 1941

The dorsal gunner's position gave rise to the sobriquet Gobbo (hunchback) for the aircraft. Color schemes varied; this dark painted machine carrying its almost indistinct unit number on the fuselage and a badge on the fin.



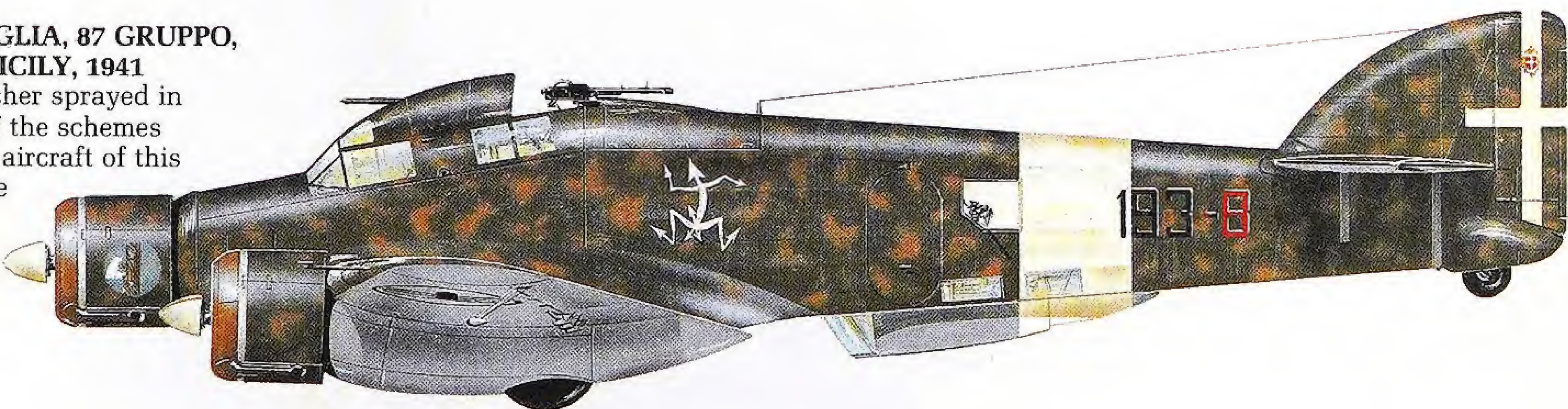
S.M.79/P.XI, 283 SQUADRIGLIA, 130 GRUPPO AUTONOMO, REGIA AERONAUTICA, MEDITERRANEAN, 1942

The Italian Aerosiluranti or torpedo-bombing units led the world in equipment and technique, a claim underlined by their success against Allied shipping. A white theater band circled the fuselage on this mottle camouflaged example.



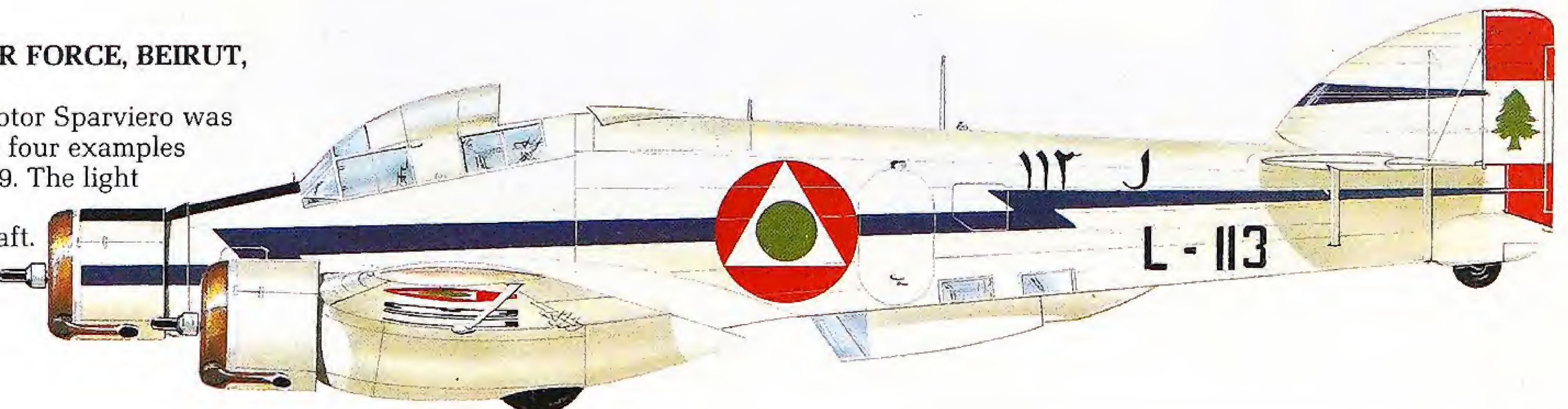
S.M.79/P.XI, 193 SQUADRIGLIA, 87 GRUPPO, REGIA AERONAUTICA, SICILY, 1941

Dark Green with Yellow Ocher sprayed in random form was typical of the schemes applied to Italian Air Force aircraft of this period. On the center engine cowling is a single fasces marking; on the rudder cross is the badge of the House of Savoy.



S.M.79/P.XI, LEBANESE AIR FORCE, BEIRUT, LEBANON, 1956

The last user to fly the trimotor Sparviero was this air arm which acquired four examples and retained them until 1959. The light coloring was an attempt to reduce heat inside the aircraft. Sister aircraft L-112 is now preserved in an Italian museum.

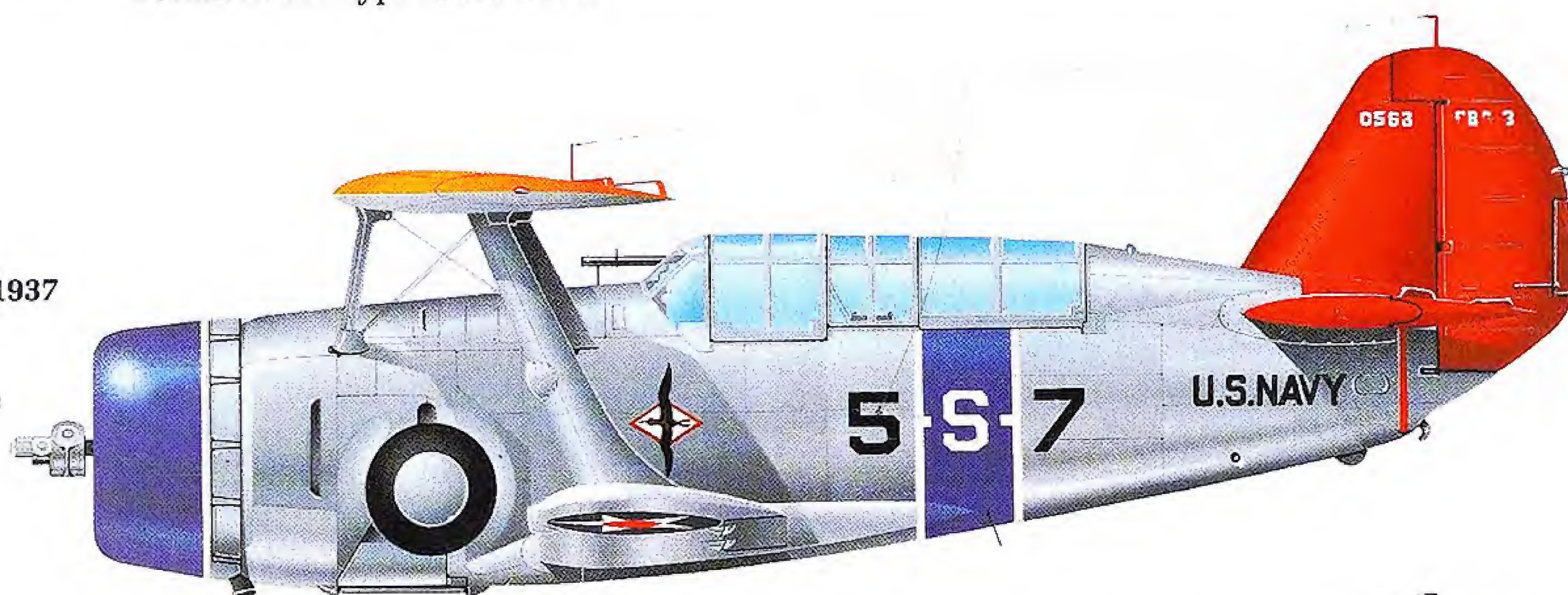


CURTISS HELLDIVER

The last of the US Navy's combat biplanes, the Helldiver was originally a monoplane with a parasol-wing, but the Navy's need for a carrier-based dive-bomber required the strength of a biplane layout. A year and a half after the prototype's first flight, deliveries began to Squadron VS-5 in July 1937. The first series model was the SBC-3, followed by the re-engined -4. Obsolete at the start of the war, the Helldiver remained well out of the way of the formidable Axis fighters, even though one Marine unit retained the type until 1943.

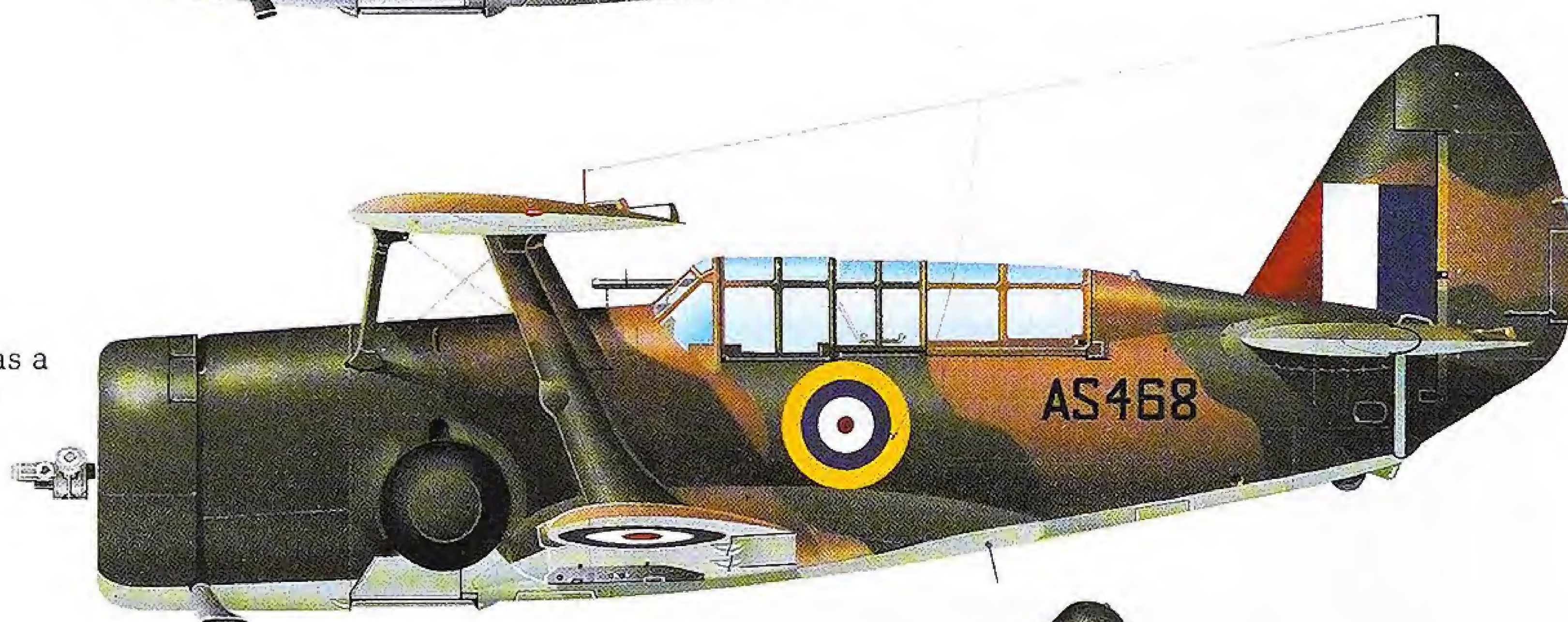
SBC-3, VS-5, US NAVY, USS YORKTOWN, 1937

These initial aircraft were delivered and operated in natural metal finish, apart from the chrome yellow on the upper wing surface and the red tail, the latter signifying the Yorktown. The blue areas denoted the 3rd section leader. Scouting Five's "Man O'War Bird" emblem is seen below the cockpit.

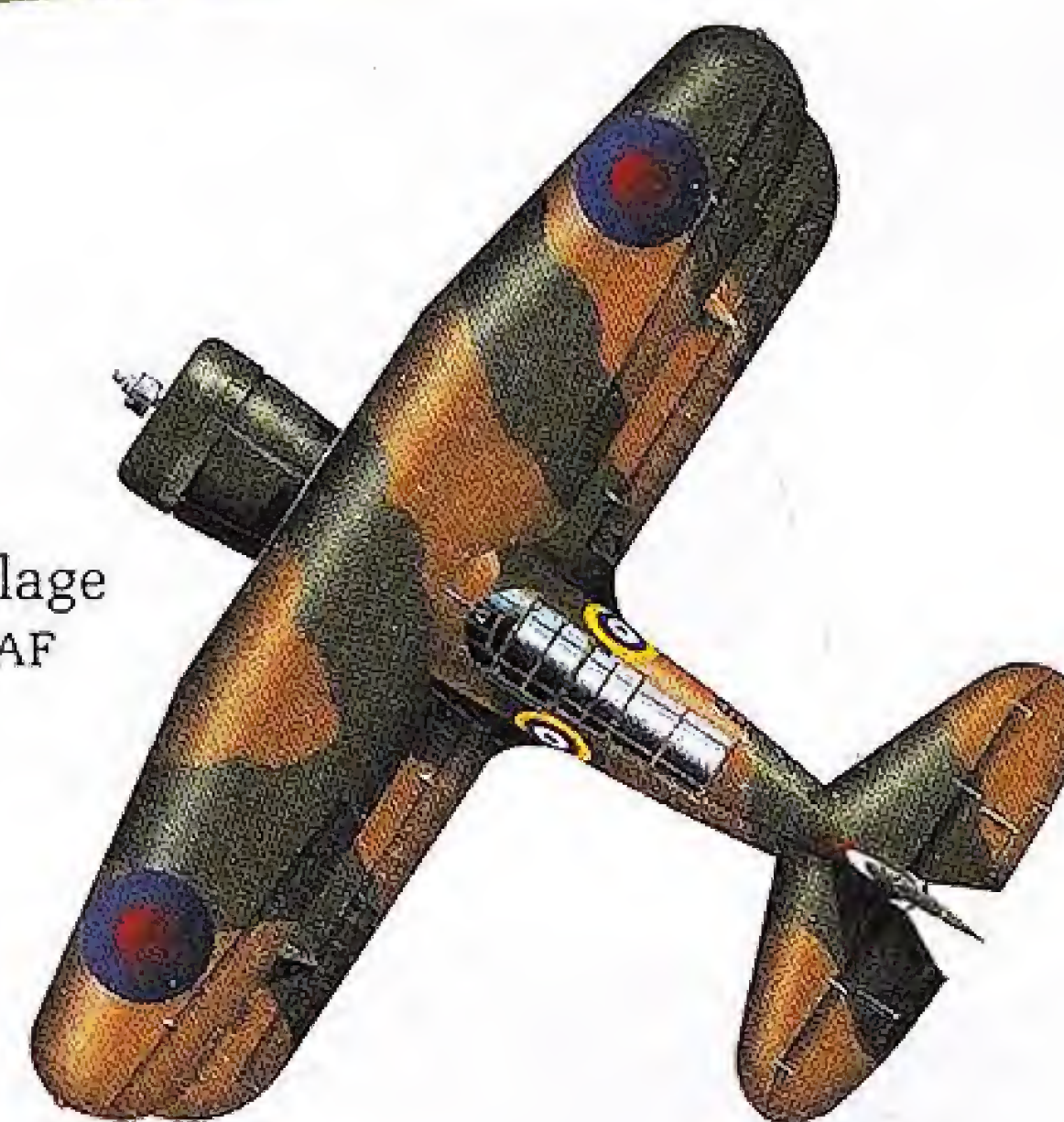


SBC-4 (CLEVELAND 1), RAF LITTLE RISSINGTON, UK, SEPTEMBER 1940

Five Helldivers found their way to the UK as a residue of 50 handed over to France by the USN. Sprayed Dark Green, Dark Earth with Sky undersides, the aircraft were used as ground instructional airframes.

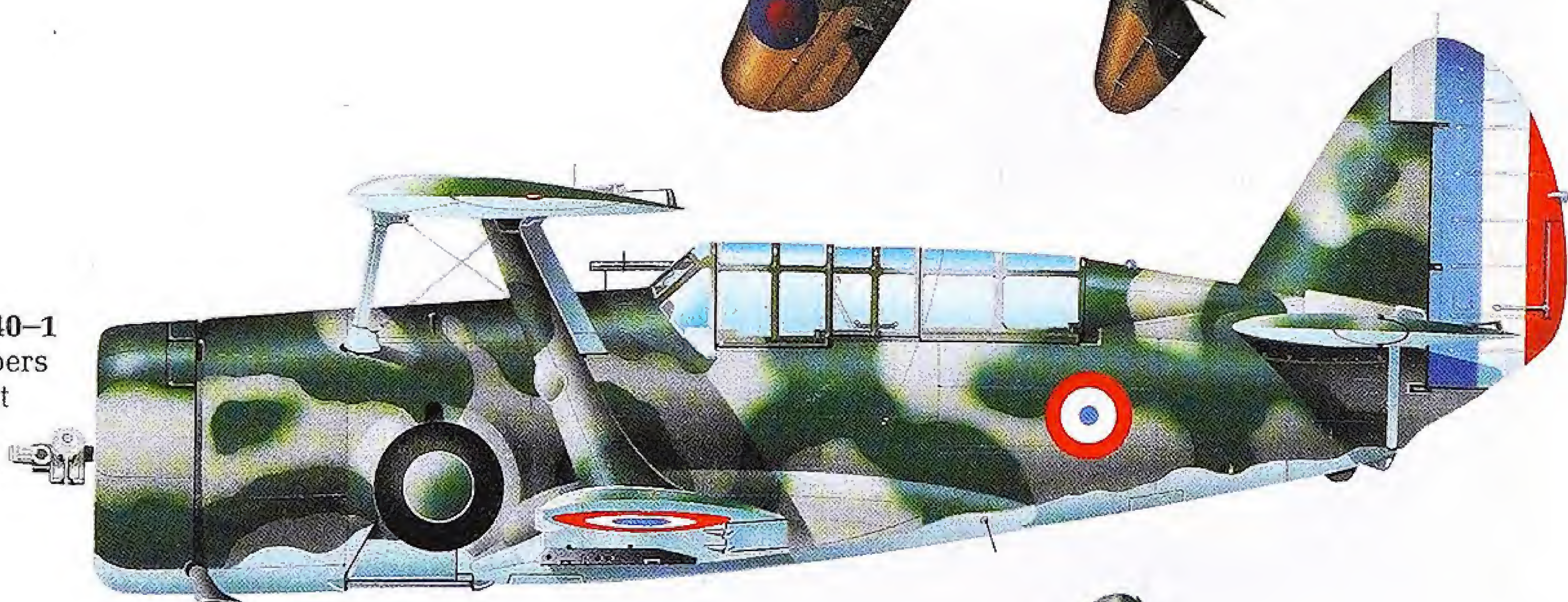


Topside camouflage pattern of the RAF Cleveland 1.



SBC-4, AERONAVALE, MARTINIQUE, 1940-1

Fifty of these obsolete carrier biplane bombers had been ordered by the French Navy, most ending up on Martinique. Camouflage was Green and Gray with Sky Blue undersides.



Plan view of the French Helldiver camouflage pattern.

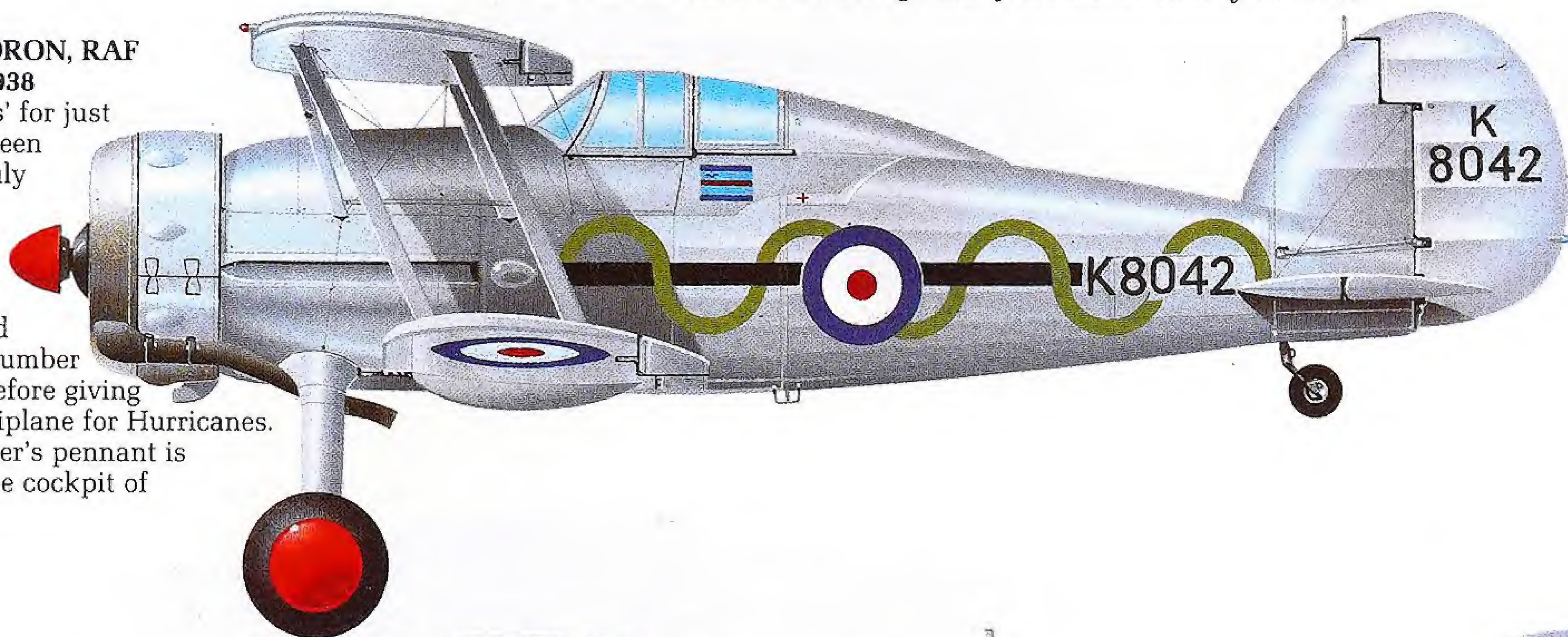


GLOSTER GLADIATOR

Famous as the last of the RAF's biplane fighters, the Gladiator was the final refinement of the earlier Gauntlet and succeeded it in squadron service. Obsolete at the outbreak of World War II, the Gladiator fought with distinction and success against superior odds during the Norwegian campaign in 1940 and held its own against the Italian Regia Aeronautica in the Western Desert, Malta and Greece. Retired from RAF front-line use at the end of 1941, the type was retained as a fighter-reconnaissance aircraft by the Finnish Air Force, being finally withdrawn only in 1945.

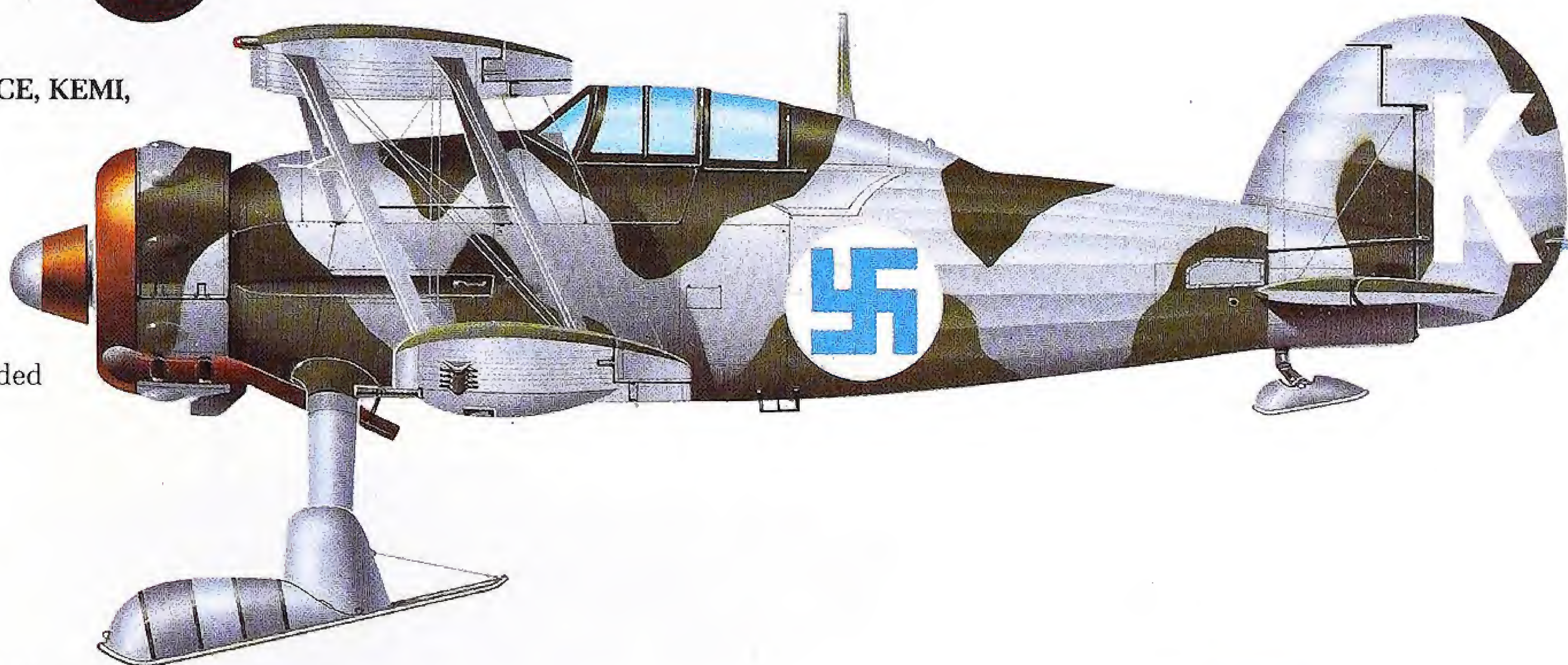
Mk I, 87 SQUADRON, RAF DEBDEN, UK, 1938

Operating 'Glads' for just over a year between June 1937 and July 1938, this unit perfected "tied-together" aerobatics using three aircraft and performed at a number of air displays before giving up this nimble biplane for Hurricanes. A squadron leader's pennant is painted under the cockpit of this machine.



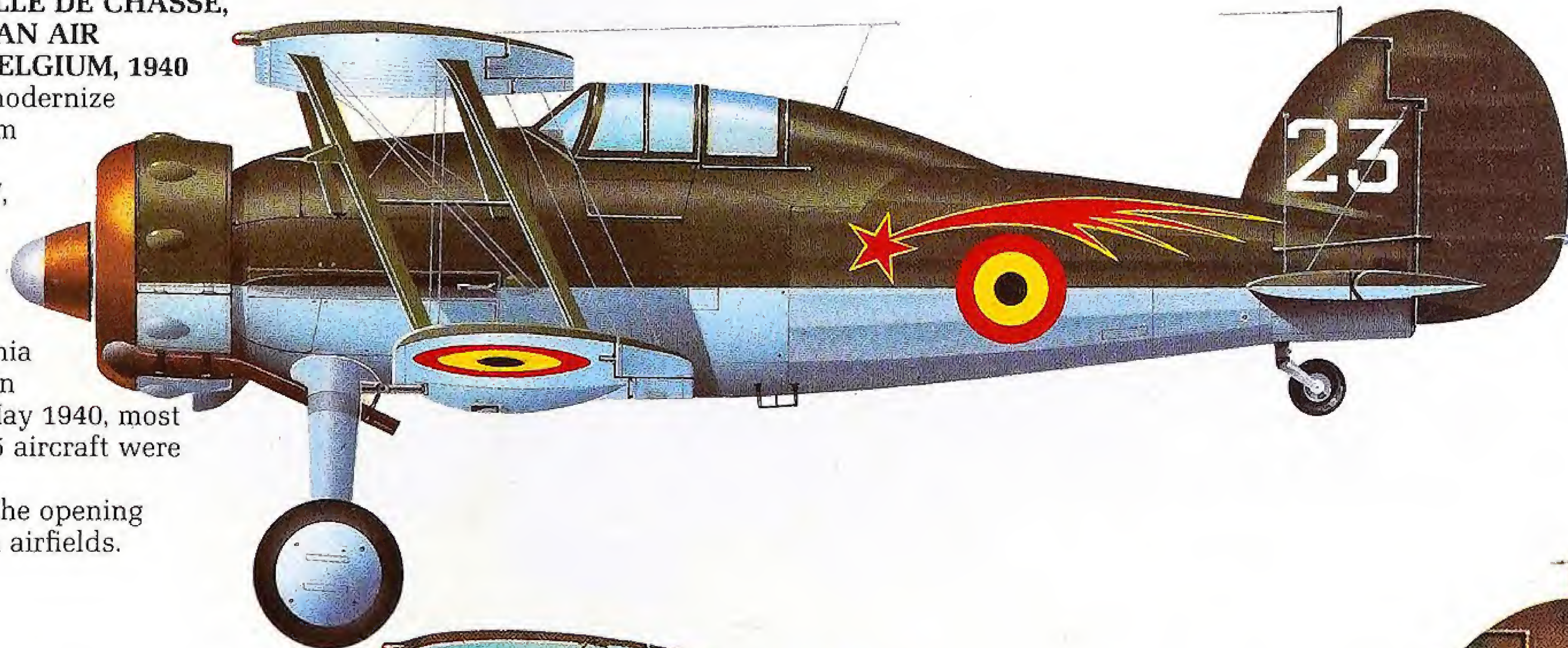
Mk I, F19, FINNISH AIR FORCE, KEMI, NORTH FINLAND, 1940

A ski-equipped J8 (Swedish designation) of the Swedish voluntary unit F19 during the Winter War against the USSR. Finland received 30 Mk IIs from the UK in 1940 and operated them until 1945. They were coded GL-251 to -280.



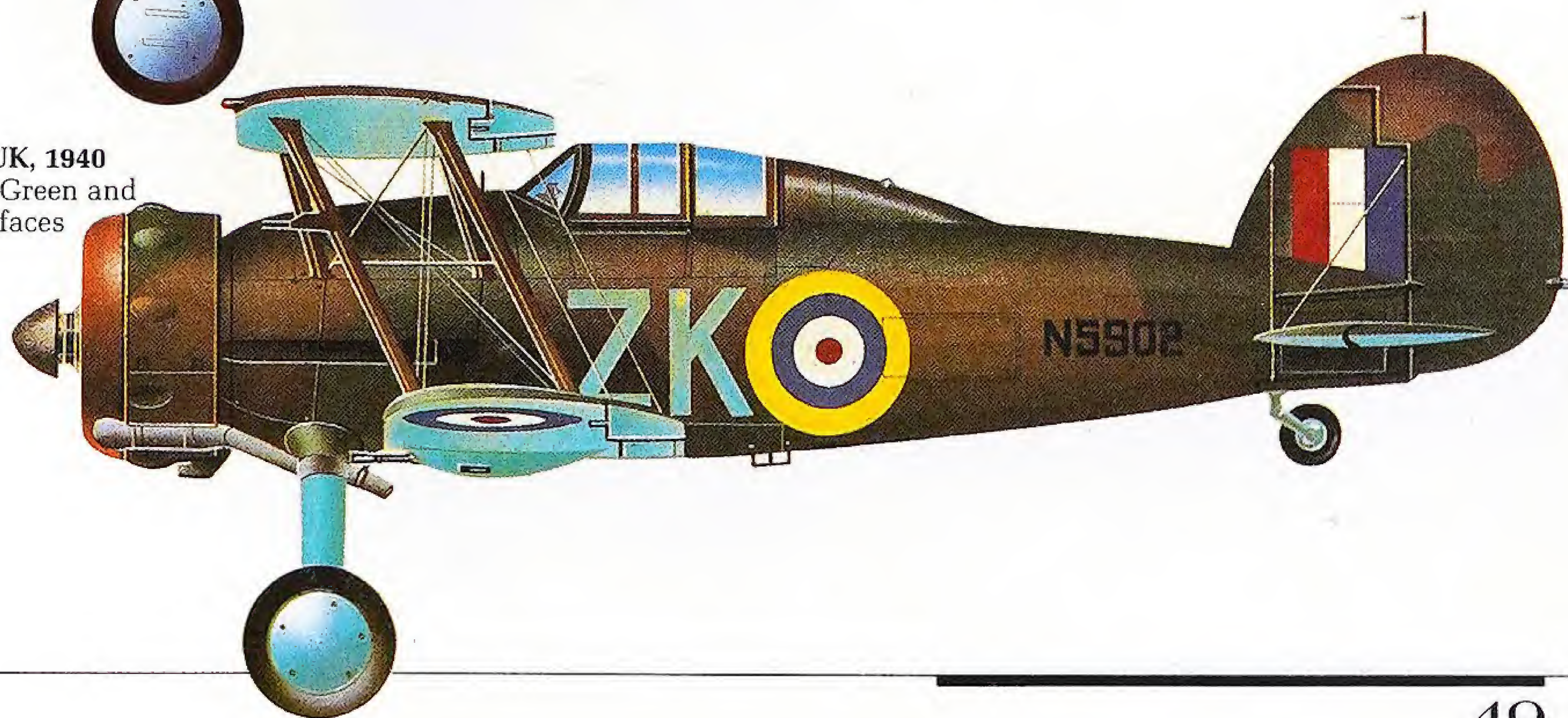
Mk I, 1 ESCADRILLE DE CHASSE, 1 GROUP, BELGIAN AIR FORCE, DIEST, BELGIUM, 1940

In an attempt to modernize its air arm, Belgium ordered 22 new Gladiators in 1937, these equipping the Escadrille Comète, so-called because of the comet insignia which originated in World War I. In May 1940, most of the surviving 15 aircraft were destroyed by the Luftwaffe during the opening attacks on Belgian airfields.



Mk II, 25 SQUADRON, RAF, UK, 1940

Early war camouflage of Dark Green and Dark Earth with Sky undersurfaces on an aircraft relegated to second-line duties. Unusually, the unit code ZK has no accompanying letter indicating the individual aircraft within the squadron.

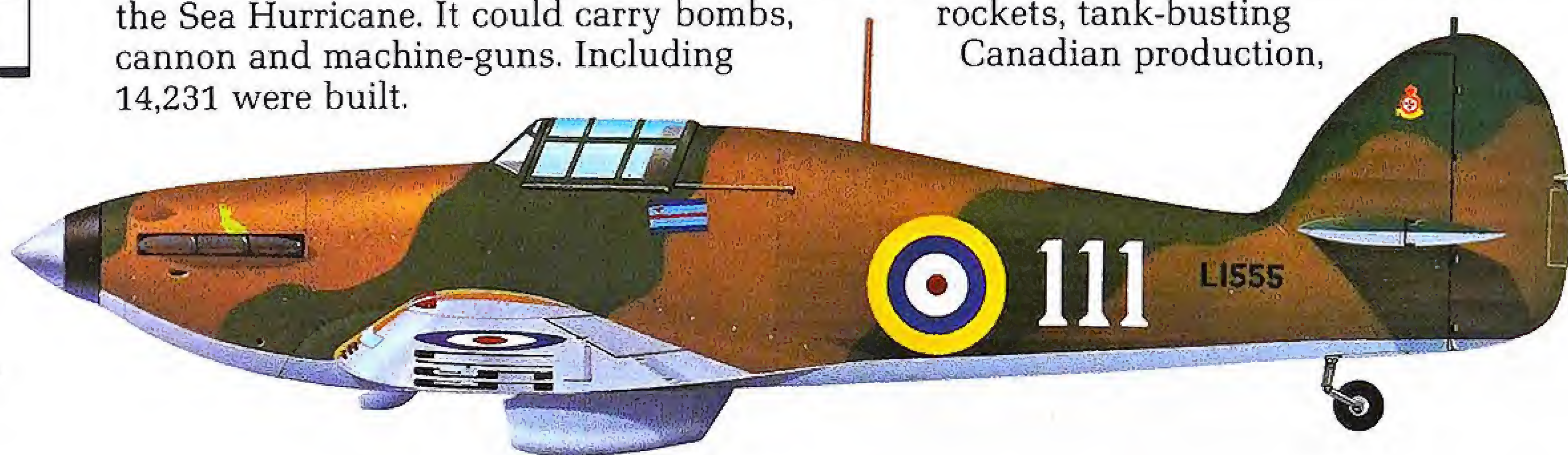


HAWKER HURRICANE

Rugged durability gave the Hurricane single-seat fighter an advantage over its main opponents during World War II and, although its top speed was less than that of the German Messerschmitt Bf 109, it could absorb considerable battle damage and still survive to return to the fray. The Hurricane fought in all war theaters, and at sea as the Sea Hurricane. It could carry bombs, cannon and machine-guns. Including Canadian production, 14,231 were built.

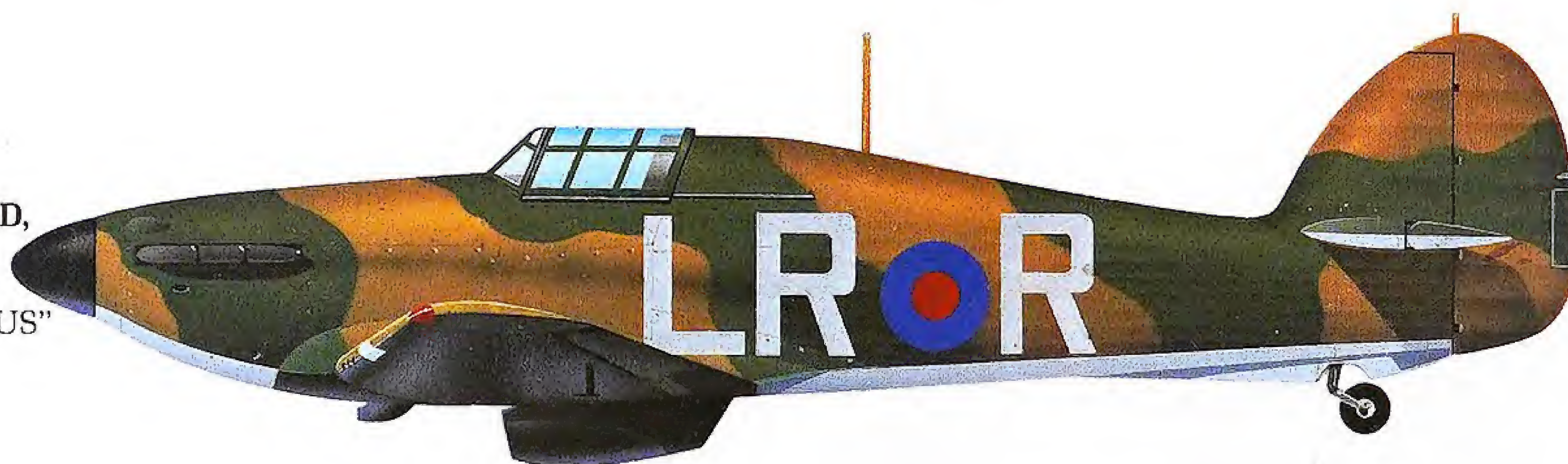
Mk I, 111 SQUADRON, RAF NORTHOLT, UK, 1938

This was Sqn Ldr J. Gillan's aircraft with rank pennant under cockpit, 8in-high unit crest on fin, 35in-diameter fuselage roundel and 6-in high serial number. The white 111 on the fuselage is of an unusual serif letter style.



Mk I, 56 SQUADRON, RAF NORTH WEALD, UK, 1939

The code letters in Medium Sea Gray, approximately 36in high, were changed to "US" from September 1939. There is no rudder flash.



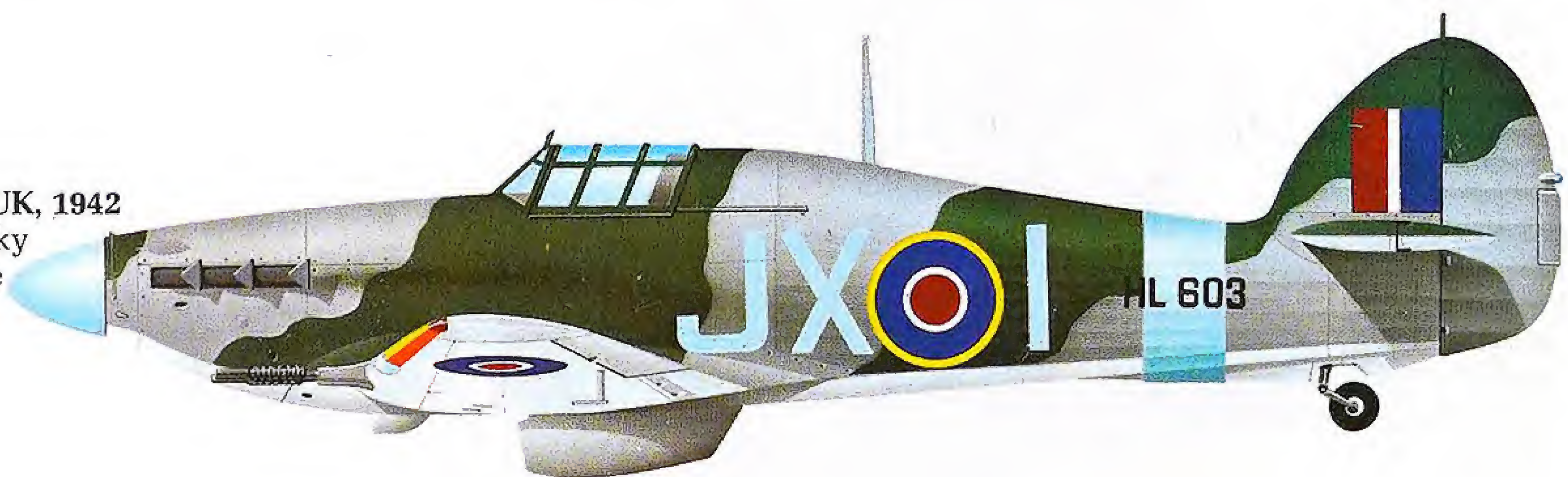
Mk I, 85 SQUADRON, RAF DEBDEN, UK, 1940

This has the Battle of Britain finish, with Sky undersides and the unit badge under the cockpit. Note the rudder flash size and position.



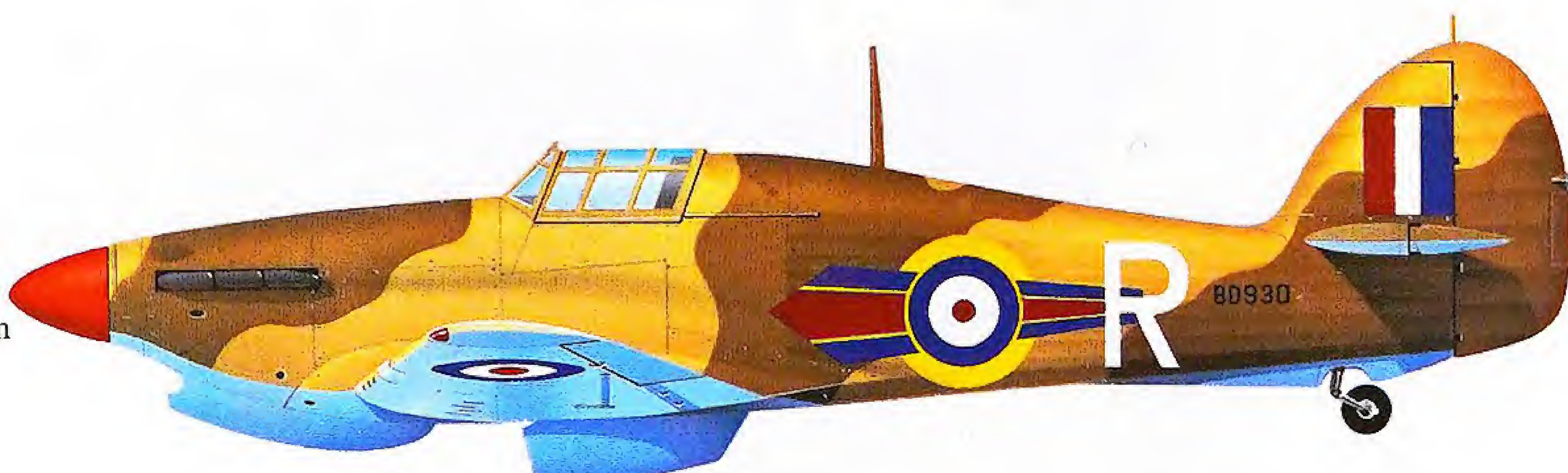
Mk IIC, 1 SQUADRON, RAF TANGMERE, UK, 1942

This has standard day-fighter colors, with Sky spinner and a yellow wing leading edge. The black serial has been applied over the rear identification band.



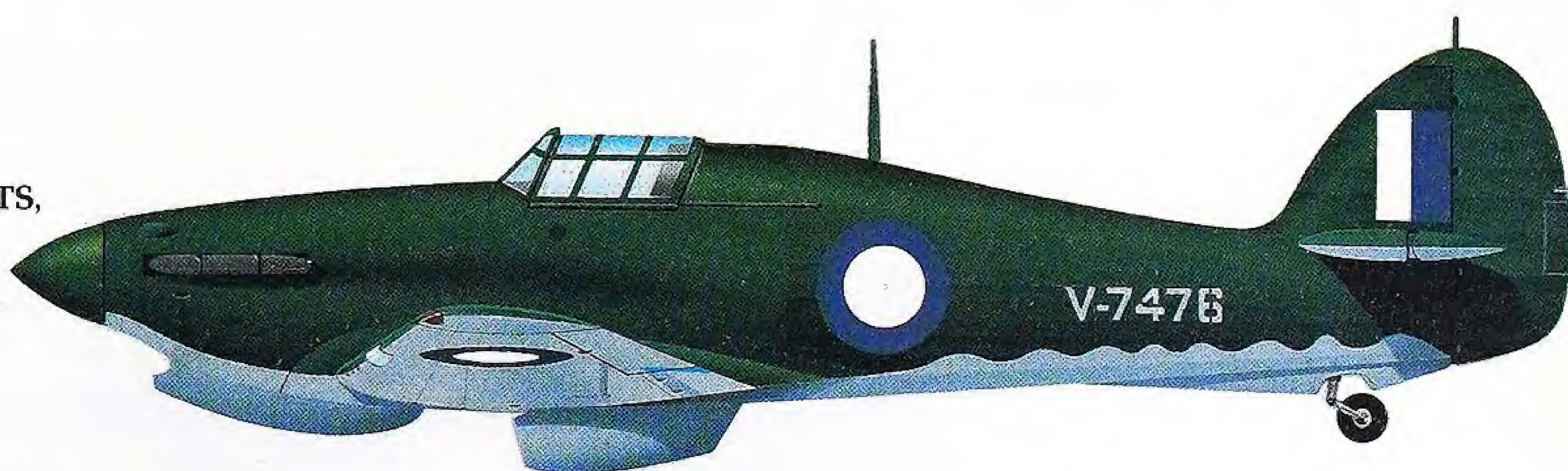
Mk IIB, 73 SQUADRON, RAF WESTERN DESERT, NORTH AFRICA, 1942

This was one of the very few units to display squadron insignia during wartime in the form of a prominent 'arrowhead' incorporated into the fuselage roundel.



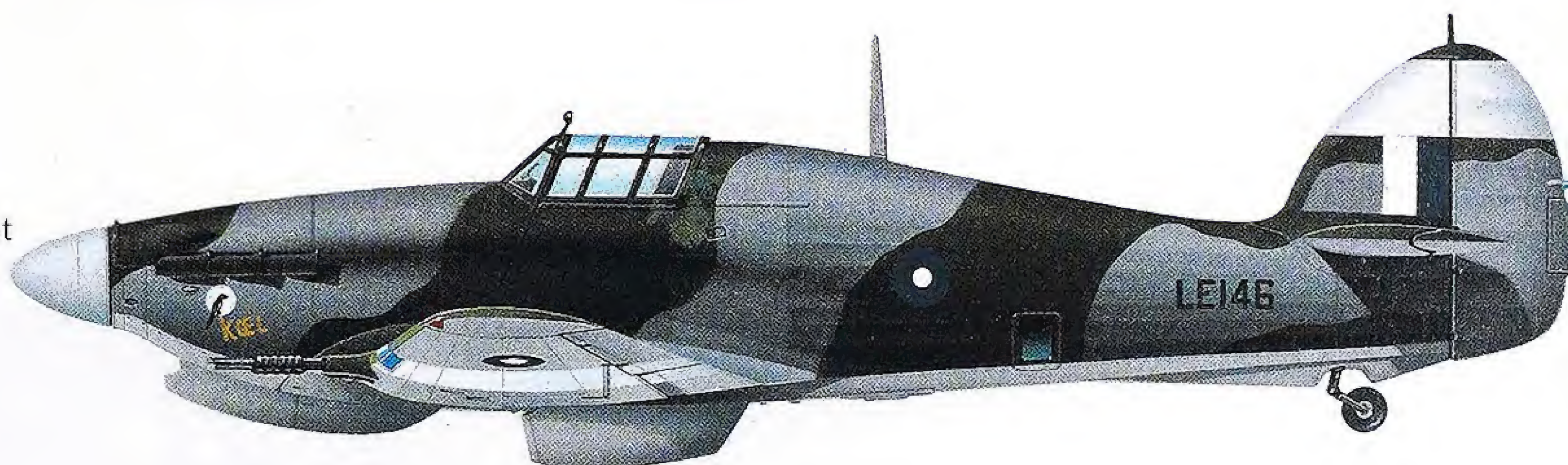
**Mk IC, No 2 & 3 COMMUNICATIONS FLIGHTS,
ROYAL AUSTRALIAN AIR FORCE, 1944**

This was the sole Australian example to survive the fall of Singapore. It retains the RAF serial number but in stenciled form.



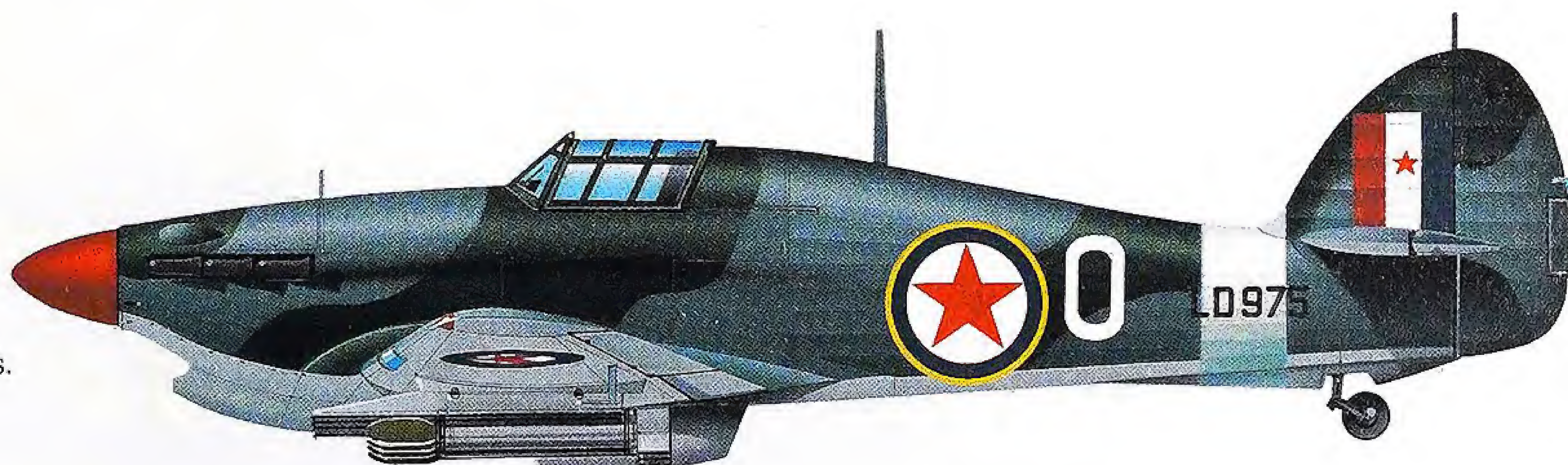
Mk IIC, INDIAN AIR FORCE, 1944

It is marked with the small SEAC (South East Asia Command) fuselage roundel and white identification bands on wings and tail.



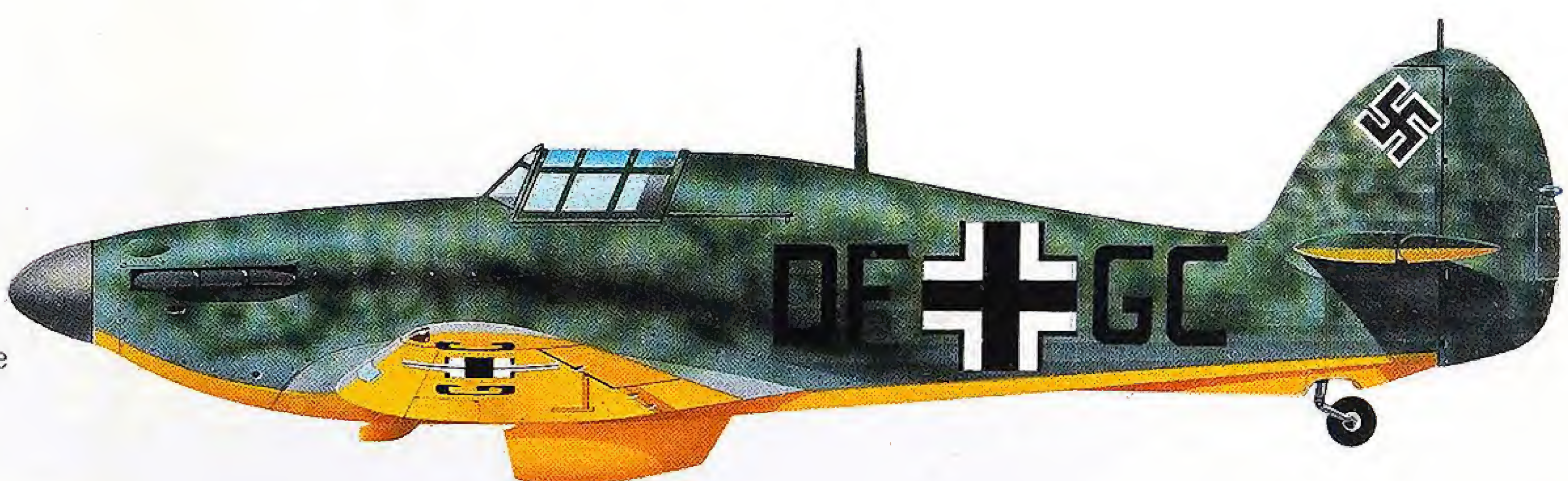
**Mk IV 351 (YUGOSLAV) SQUADRON,
PRKOS, YUGOSLAVIA, 1945**

This was the second Yugoslav squadron formed within the RAF. The Red Star was marked on all roundels and on the fin stripes.



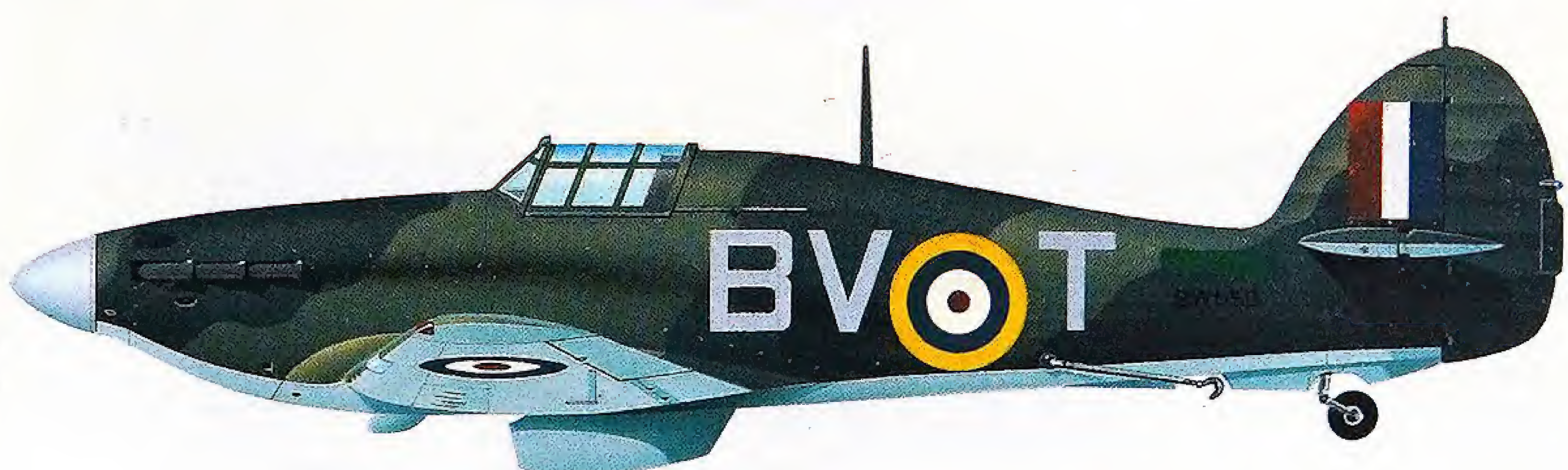
**Mk I (?), LUFTWAFFE, MAGDEBURG,
GERMANY, 1942**

It carried the Luftwaffe test codes (DF-GC) and the standard trials yellow color on the undersides. It was possibly captured in France in 1940.



**SEA HURRICANE (HURRICANE X), 440
SQUADRON, ROYAL CANADIAN AIR
FORCE, 1942**

Although built in Canada for the Royal Navy and finished in these colors, this aircraft was retained for use in Canada.

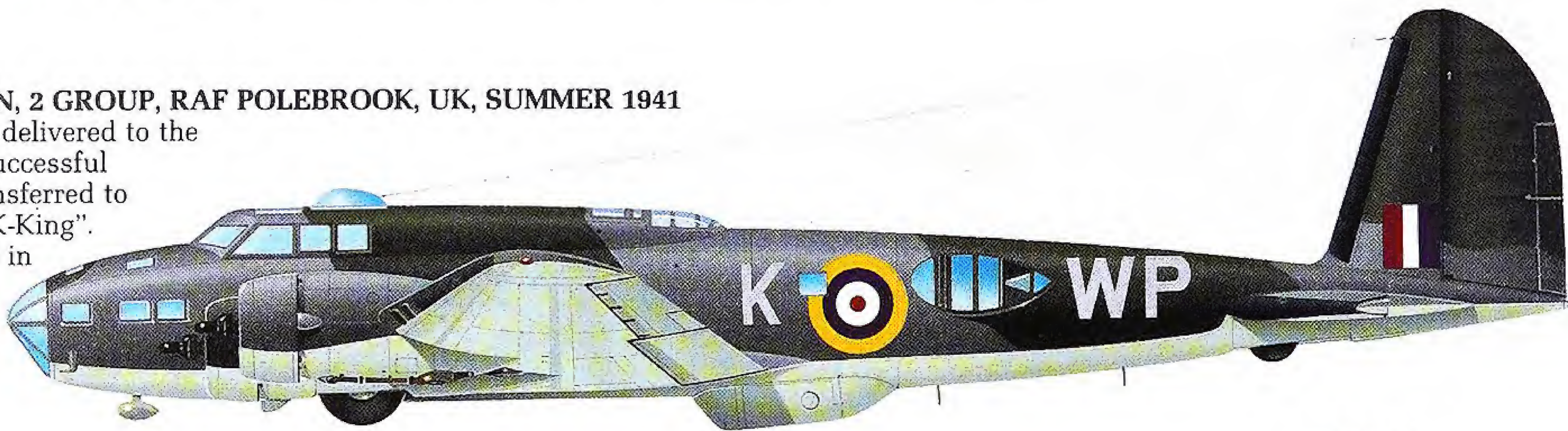


BOEING B-17

Synonymous with the daylight bombing campaign against Germany from 1942 to 1945, the Flying Fortress was regarded with affection by all who knew it. Yet it was no spectacular weight carrier, often carrying into the middle of Europe less bombs than were carried by the two-seat Mosquito. First flown as Model 299 in July 1935, the early B-17C was less than successful, but the aircraft's true worth was realized with the later F and G series. Total production was 12,731.

FORTRESS I, 90 SQUADRON, 2 GROUP, RAF POLEBROOK, UK, SUMMER 1941

Twenty B-17C versions were delivered to the RAF and after a series of unsuccessful bombing raids they were transferred to Coastal Command for MR. "K-King". AN521 was the first to arrive in the UK and commenced operations in July 1941; it crashed in Egypt in 1942.



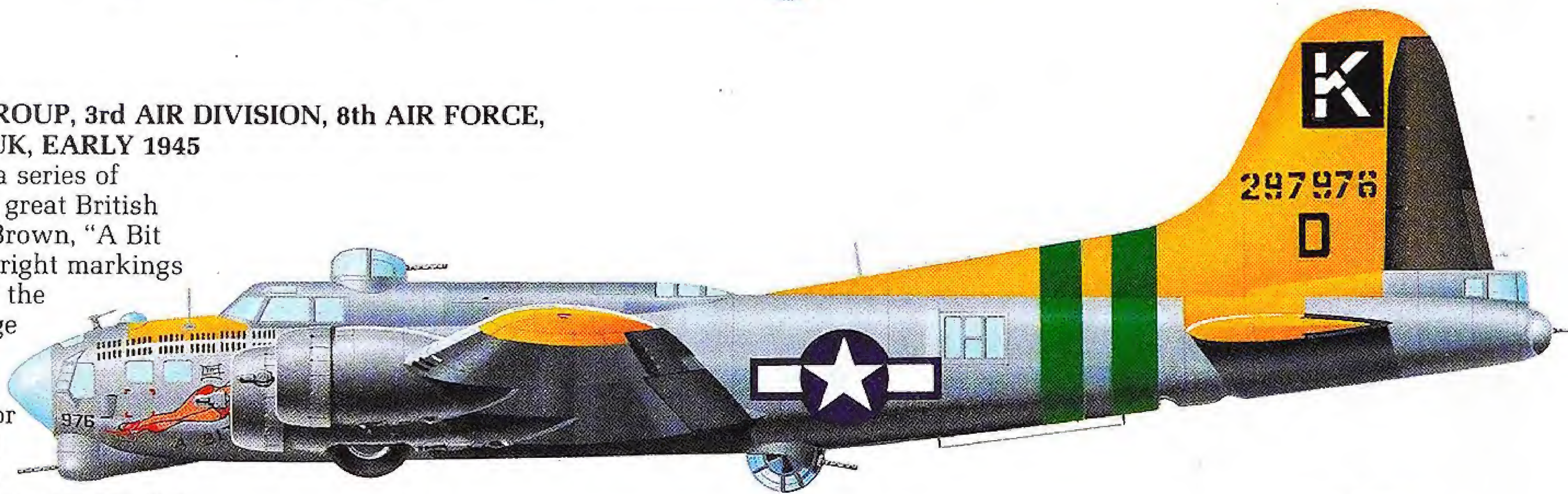
B-17F-40, 359th SQUADRON, 303rd BOMB GROUP, MOLESWORTH, UK, SUMMER 1943

Mid-war coloring on an 8th AF aircraft of Olive Drab and Neutral Gray, but with medium green blotched over the top surfaces. Codes were light gray and the star had yet to receive the bars, which were added in August 1943. Wing markings were above the left wing and below the right.



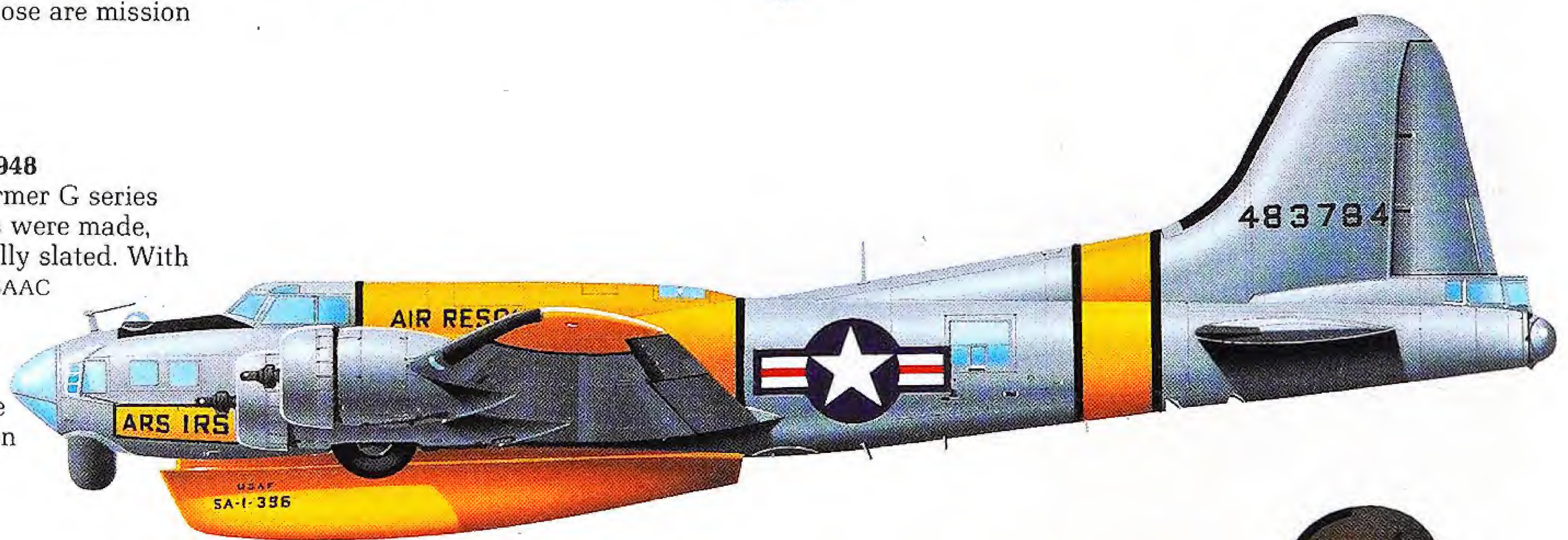
B-17G-40, 447th BOMB GROUP, 3rd AIR DIVISION, 8th AIR FORCE, USAAF, RATTLES DEN, UK, EARLY 1945

Famous as the subject of a series of photographs taken by the great British photographer Charles E. Brown, "A Bit O'Lace" displays typical bright markings used by the bombers near the end of the war. Camouflage was dispensed with, the natural metal-finished aircraft now receiving color and symbols to make unit identification easier in the huge formations. On the nose are mission markings for 83 raids.



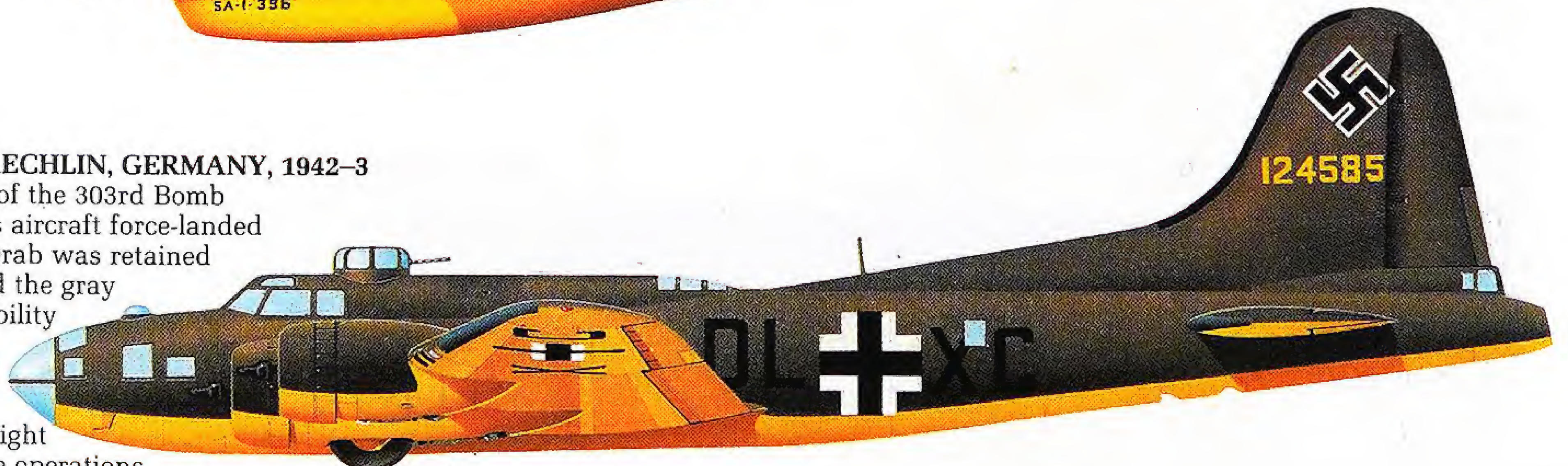
B-17H, US AIR FORCE, 1948

Only 50 conversions of former G series bombers into SAR B-17Hs were made, although 130 were originally slated. With the change of title from USAAC to USAF, this conversion was redesignated SB-17G. Under the fuselage was a 27ft lifeboat painted in the same bright yellow used on the aircraft.



B-17F-27, LUFTWAFFE, RECHLIN, GERMANY, 1942-3

Originally "Wulf Hound" of the 303rd Bomb Group at Molesworth, this aircraft force-landed in December 1942. Olive Drab was retained above, but yellow replaced the gray undersides for higher visibility during tests and trials, included demonstrations to German fighter units. It was later repainted in night camouflage for clandestine operations.



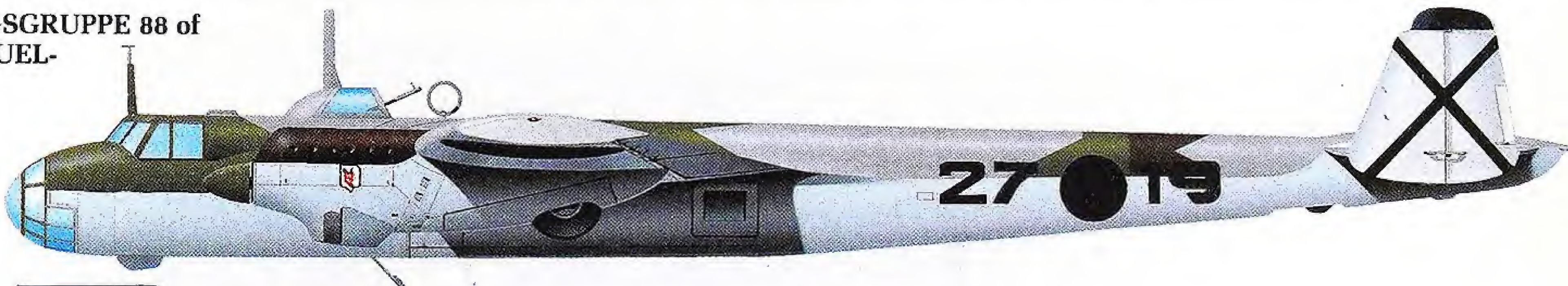
DORNIER

Do 17

Originally developed for Lufthansa as a high-speed mailplane, the Do 17 "Flying Pencil" became one of the most famous bombers of World War II and certainly one of the most attractive. The single fin and rudder of the prototype gave way to the well-known twin-finned layout and as the Do 17E and the reconnaissance F, the type went to war in Spain early in 1937. Other variants were the 17M, 17P and the final and most widely-produced Do 17Z. Total production of the Do 17 series was about 1700.

Do 17E-1, AUFKLÄRUNGSGRUPPE 88 of LEGION CONDOR, BUÑUEL- TUDELA, SPAIN, 1938

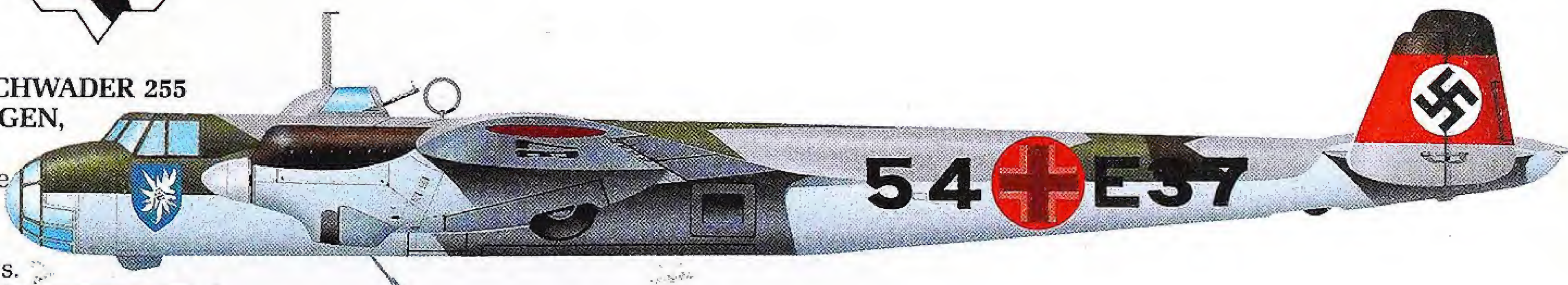
Operational during the Nationalist offensive in Aragon, this aircraft has the then standard three-color segmented camouflage over the top surfaces. These aircraft evaded with ease the obsolete fighters used by the Republican air force.



Devil's Head insignia applied to the engine cowlings of A/88 and K/88 Legion Condor Dorniers.

Do 17E-1, III/KAMPFGESCHWADER 255 "EDELWEISS", MEMMINGEN, GERMANY, 1938

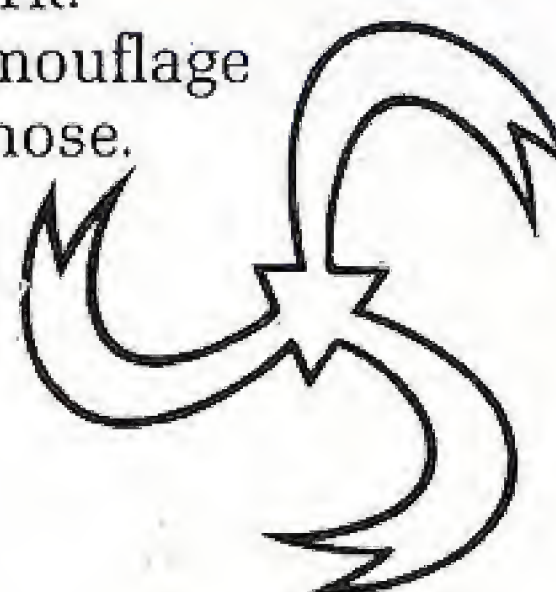
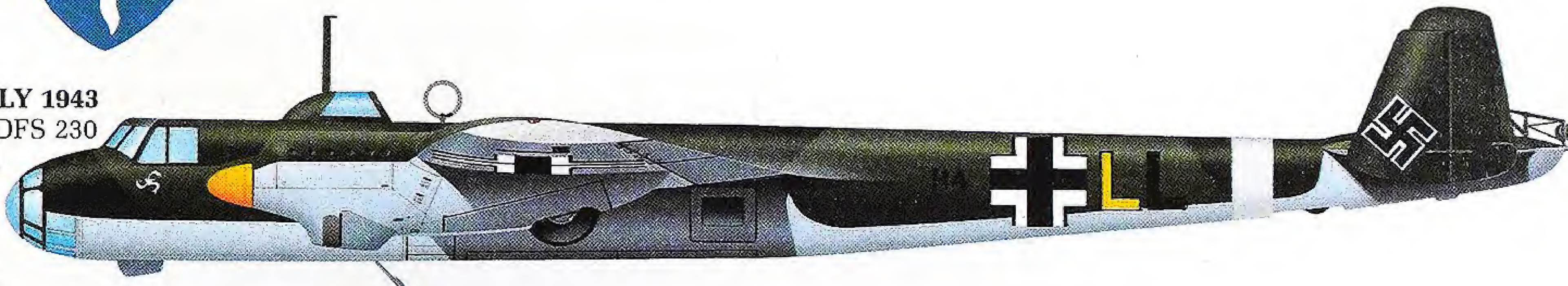
Finished in "splinter" style three-color camouflage, a Do 17 poses as the "enemy" during war games. The swastika was retained, but the crosses have been obscured. This unit subsequently became III/KG 51.



During World War II, the Edelweiss badge was to become well known by both friend and foe alike. KG 51 retained it throughout.

Do 17E-1, 1/LLG 1, LÉZIGNAN, FRANCE, JULY 1943

Used as a tug aircraft for DFS 230 gliders and equipped with a rigid tow installation at the tail, this ageing aircraft was ending its days on second-line work. Standard two-green camouflage and unit badge on the nose.



Unit emblem of 1/LLG 1.

Do 17P-1, 3.(F)/22, LUXEMBOURG, MAY 1940

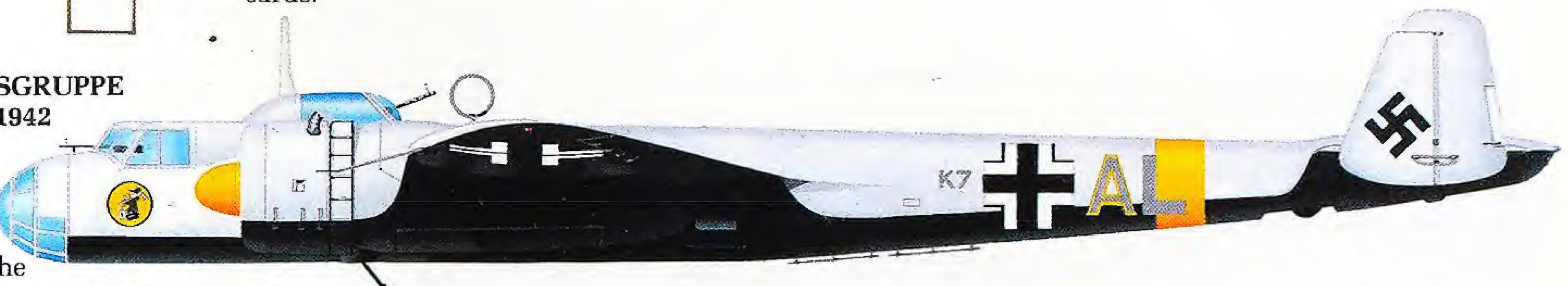
Reconnaissance version of the bomber, the P-1 seen here flew night ops for which it was given a random spray of black paint over the Hellblau undersides. This variant was powered by BMW 132N radials in place of the earlier BMW VI liquid-cooled engines.



Diamond on a Balkankreuz of 3.(F)/22. The Gruppe had been stationed at Kassel-Rothwesten before the war; the first two letters of the names formed the word Karo – the German equivalent of diamond on playing cards.

Do 17P-1, AUFKLÄRUNGSGRUPPE 3.(F)/NACHT, PLESKAU, 1942

White top surface camouflage for daylight operations or dispersal on a bleak Eastern Front airfield, contrasting with the matt black under-surface finish for night reconnaissance duties. Note the yellow theater band and spinners.



The 'Night Watchman' badge of 3.(F)/Nacht.

MESSERSCHMITT Bf 109

With a total production run of some 35,000, the Bf 109 can claim to be the most-produced fighter aircraft in history. Conceived as a lightweight fighter, the prototype made its first flight in September 1935 and by the beginning of World War II, 1056 Bf 109B, C, D and E versions had been delivered to the Luftwaffe. These were followed by the F, G and K series. The aircraft fought on all fronts and through five years of war became the mount of some of Germany's leading aces, including Erich Hartmann, top scorer with 352 victories flying Bf 109s.

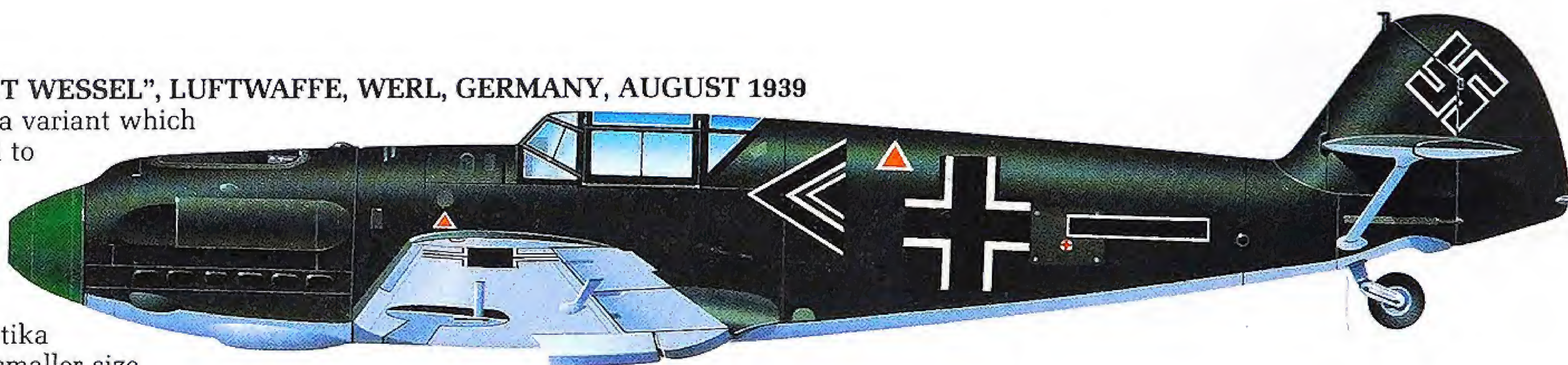
Bf 109 V10, 4TH INTERNATIONAL FLYING MEETING, LUFTWAFFE, ZÜRICH-DÜBENDORF, 1937

To raise German aviation prestige abroad, a team of five Bf 109s was entered for this famous meeting and such was the performance of this new fighter that they succeeded in winning most of the events. However, Ernst Udet in this civil-registered prototype crashed and, although he was unhurt, the aircraft was written off.



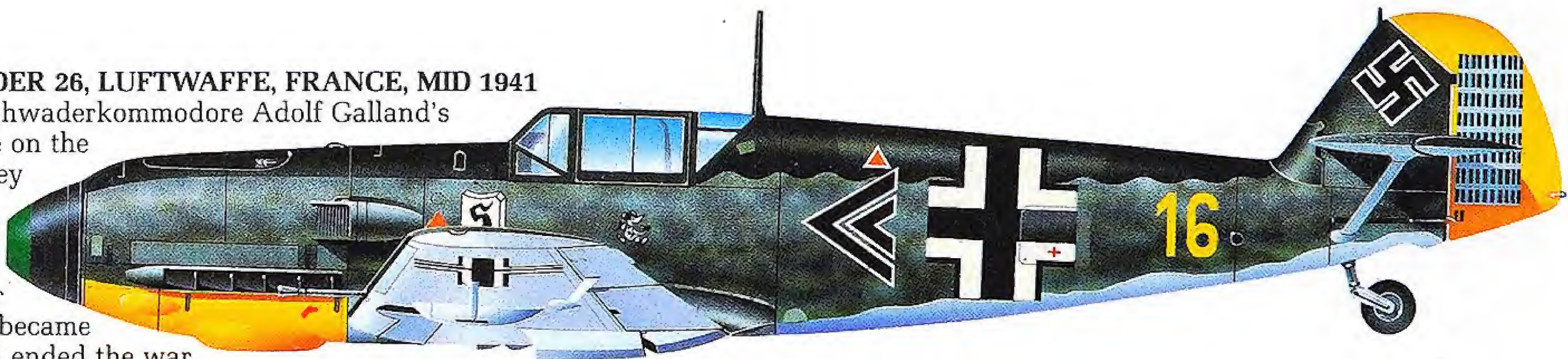
Bf 109D-1, II/ZG 26 "HORST WESSEL", LUFTWAFFE, WERL, GERMANY, AUGUST 1939

Pre-war fighter scheme on a variant which was shortly to be relegated to training duties with the arrival of the higher performance E version. The chevron indicates the Gruppenkommandeur's aircraft and the large swastika would soon give way to a smaller size applied only to the fin.



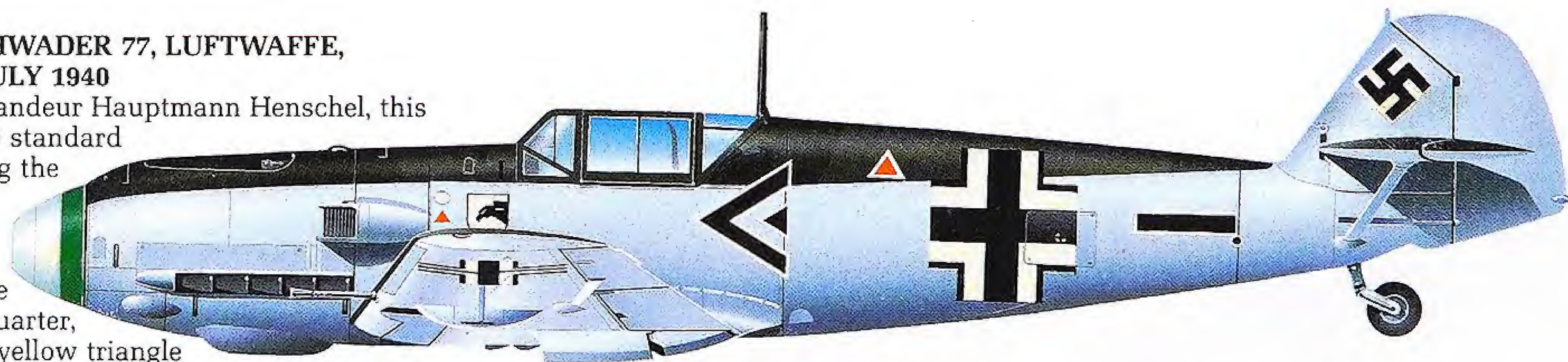
Bf 109E-3, JAGDESCHWADER 26, LUFTWAFFE, FRANCE, MID 1941

A true ace's aircraft – Geschwaderkommodore Adolf Galland's machine, carrying his score on the rudder, his personal "Mickey Mouse" emblem below the cockpit and the unit Schlager badge behind the engine supercharger air intake. Galland eventually became General der Jagdflieger and ended the war flying Me 262 jets.



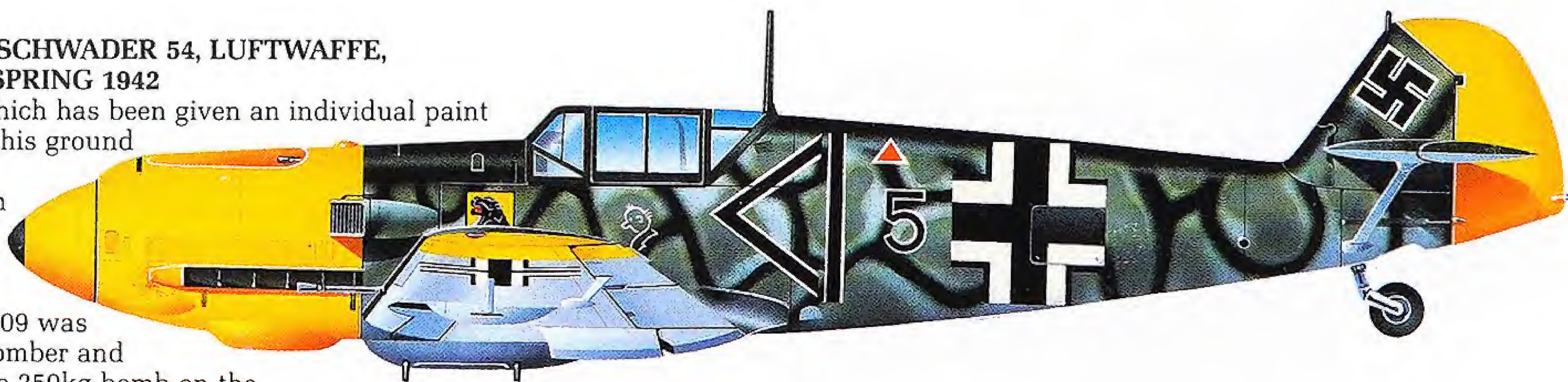
Bf 109E-3, II/JAGDGESCHWADER 77, LUFTWAFFE, AALBORG, NORWAY, JULY 1940

Flown by Gruppenkommandeur Hauptmann Henschel, this aircraft typifies one of the standard color schemes used during the Battle of Britain period. The light blue extended up the fuselage to the three-quarter line with the greens covering the top quarter, wings and tailplane. The yellow triangle on the rear fuselage is the 87-octane fuel marker, while the smaller triangle by the unit badge is the oil-filler marking.



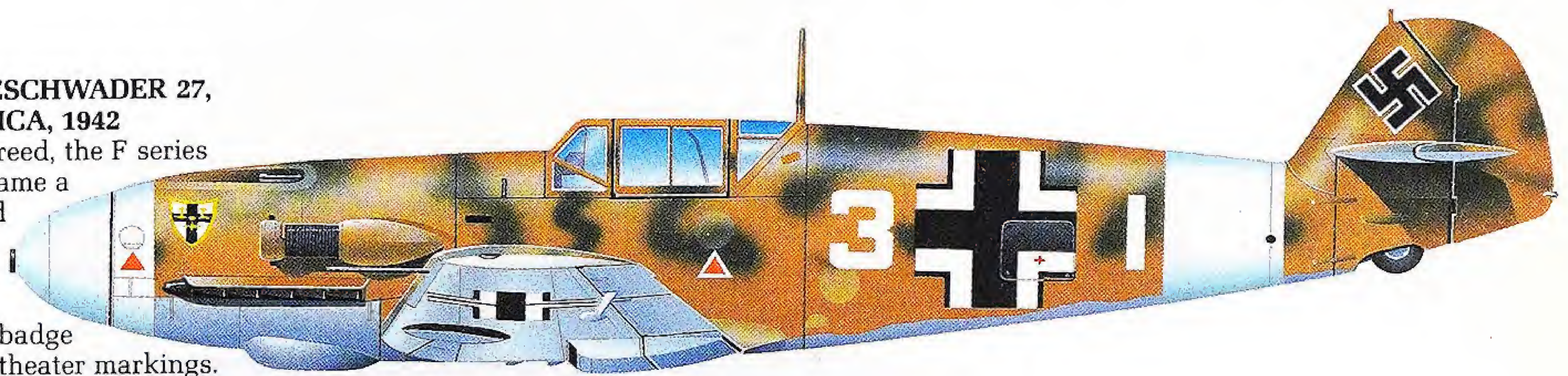
Bf 109E-4/B, II/JAGDGESCHWADER 54, LUFTWAFFE, LENINGRAD FRONT, SPRING 1942

Ltn Steindl's aircraft, which has been given an individual paint scheme, presumably by his ground crew. Variations of this finish have been seen on other aircraft flown by JG 54 "Grünherz" during this period. The E-4/B version of the Bf 109 was employed as a fighter-bomber and normally carried a single 250kg bomb on the centerline weapons carrier.



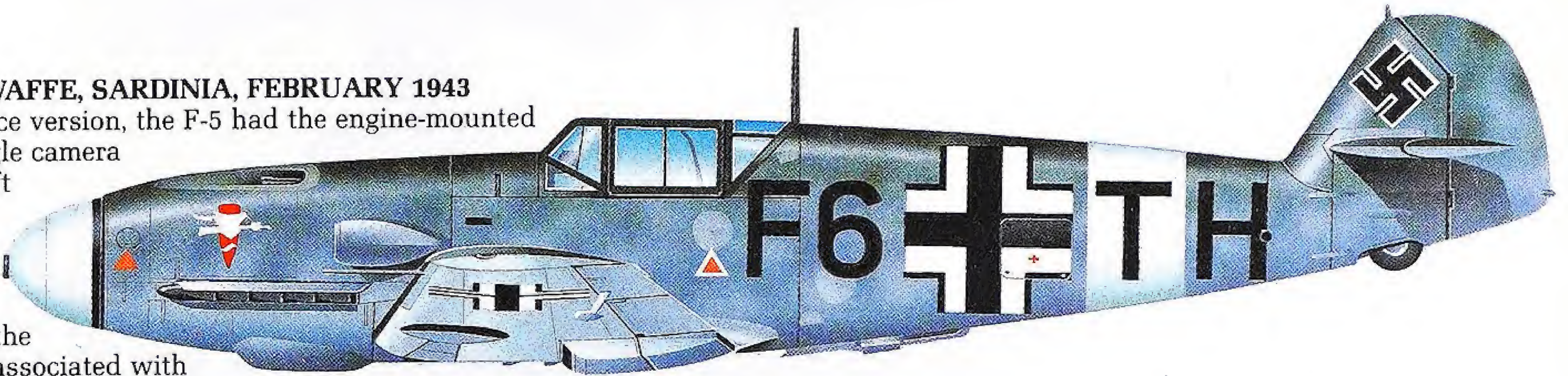
Bf 109F-2/TROP, III/JAGDGESCHWADER 27, LUFTWAFFE, NORTH AFRICA, 1942

Considered the best of the breed, the F series refined the earlier E and became a true pilot's aircraft. In skilled hands it often defeated the cream of the Allied fighters, the Spitfire V. This Afrika Korps example has the unit badge on the nose and white Med. theater markings.



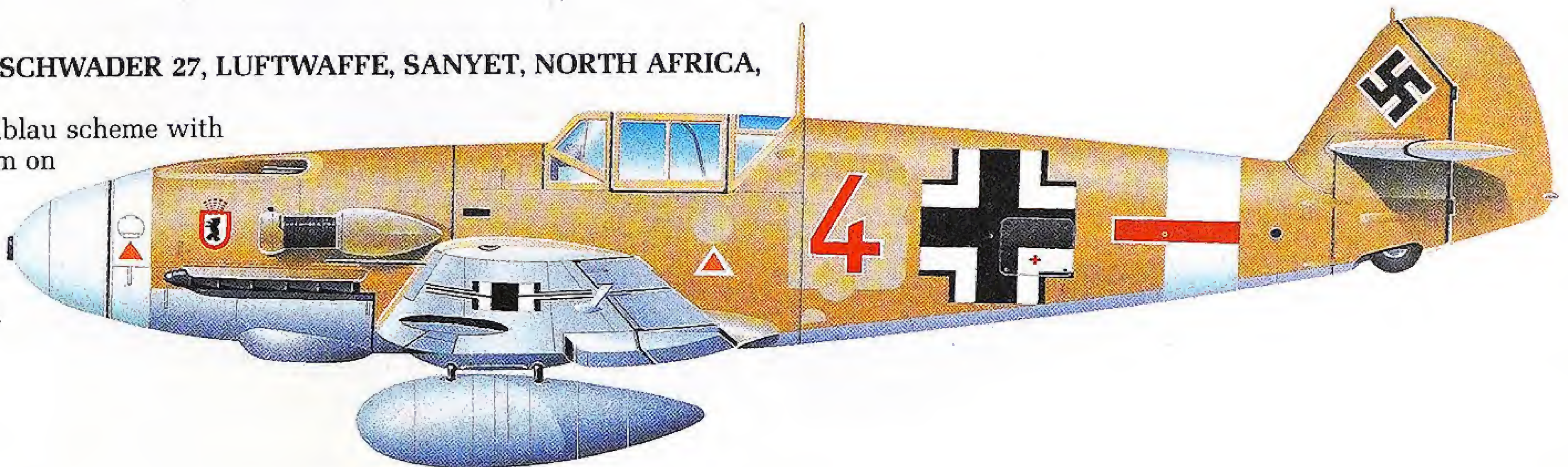
Bf 109F-5, 1.(F)/122, LUFTWAFFE, SARDINIA, FEBRUARY 1943

A specialized reconnaissance version, the F-5 had the engine-mounted cannon removed and a single camera mounted vertically in the aft fuselage. This unit also operated Ju 88Ds. By 1943, gray was becoming more widely used for Luftwaffe camouflage schemes. Note the coding, which is generally associated with multi-engined aircraft.



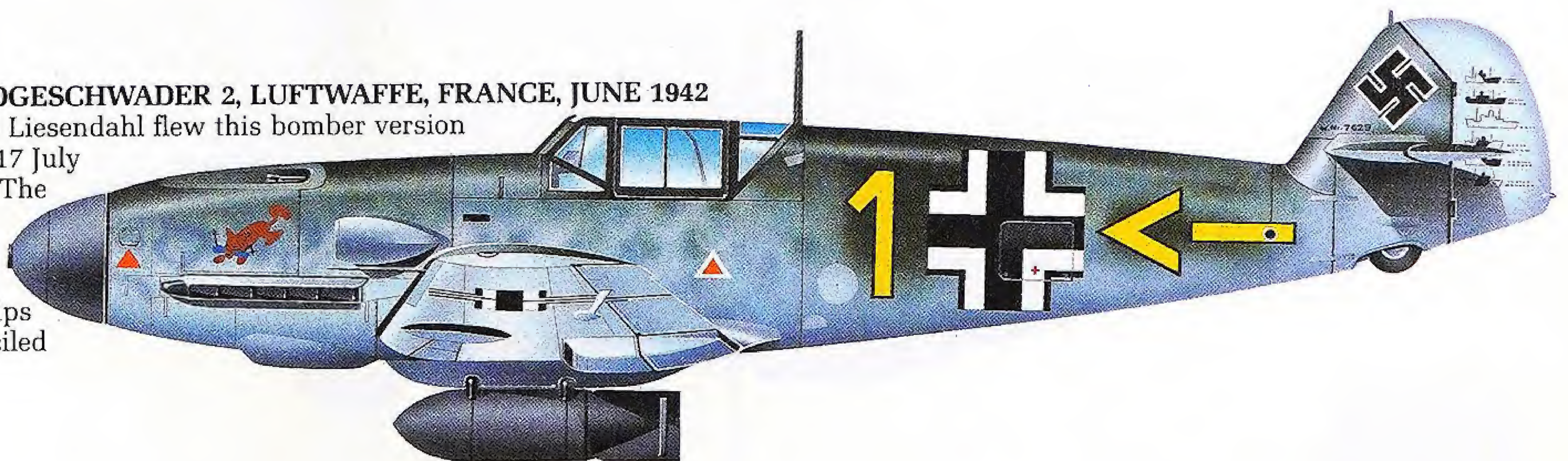
Bf 109F-4/TROP, II/JAGDGESCHWADER 27, LUFTWAFFE, SANYET, NORTH AFRICA, SEPTEMBER 1942

Standard Sandgelb and Hellblau scheme with the unit's Berlin Bear emblem on the nose in front of the tropical filter. Aircraft number 4 has been applied over a previous number which has been painted out.



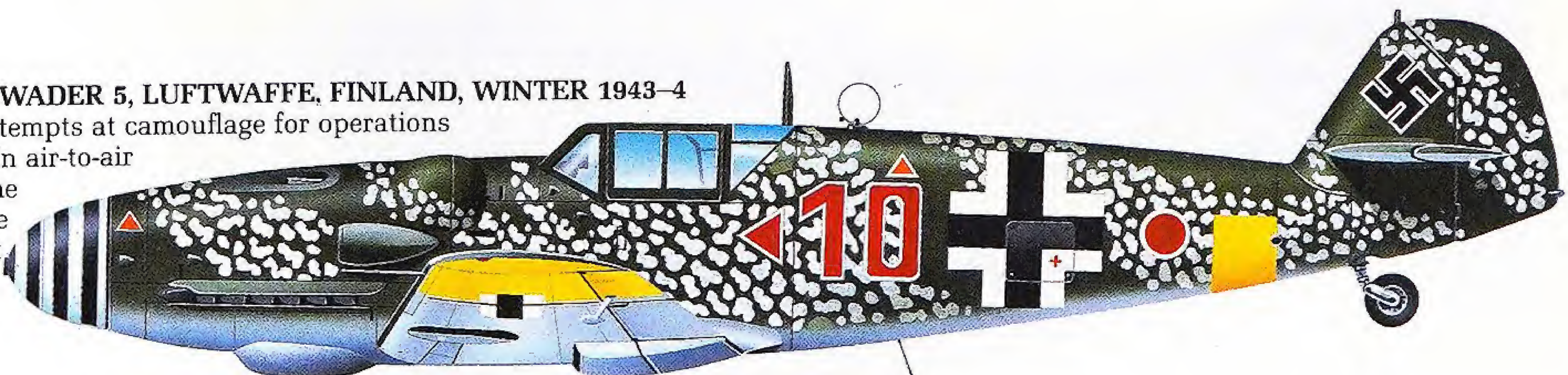
Bf 109F-4/B, 10.(JABO)/JAGDGESCHWADER 2, LUFTWAFFE, FRANCE, JUNE 1942

Staffelkapitan Oberleutnant Liesendahl flew this bomber version before being shot down on 17 July 1942 off Brixham, England. The red fox chewing a ship badge of JG 2 "Richthofen" was painted on the nose, while the pilot's score of ships sunk or damaged was stenciled on the rudder.



Bf 109G-6, IV/JAGDGESCHWADER 5, LUFTWAFFE, FINLAND, WINTER 1943-4

One of the more unusual attempts at camouflage for operations during the winter months. In air-to-air combat, this dappled scheme was probably quite effective considering the snow/forest landscape against which most missions were flown.

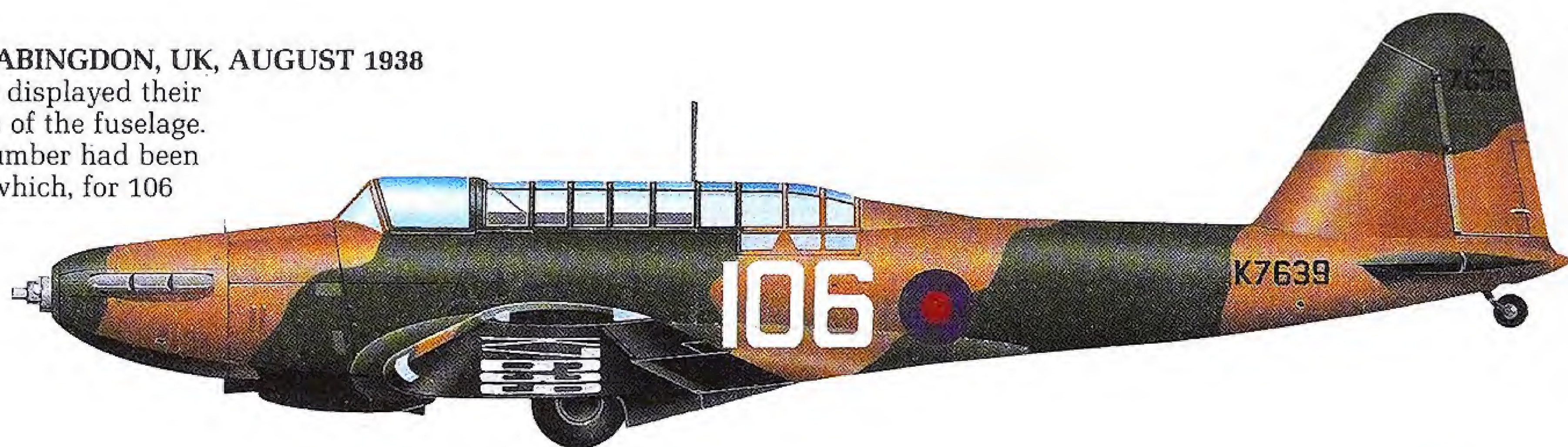


FAIREY BATTLE

Designed to replace the biplane Hawker Hart, the Battle and the concept of the single-engined day bomber had been overtaken by events and technology when it went to war in 1939. Underpowered and underarmed, the aircraft suffered major losses in men and machines. As a result, after the summer of 1940 the type was withdrawn from front-line service with the RAF and relegated to second-line duties, mainly in the UK and Canada. Production totaled 2303.

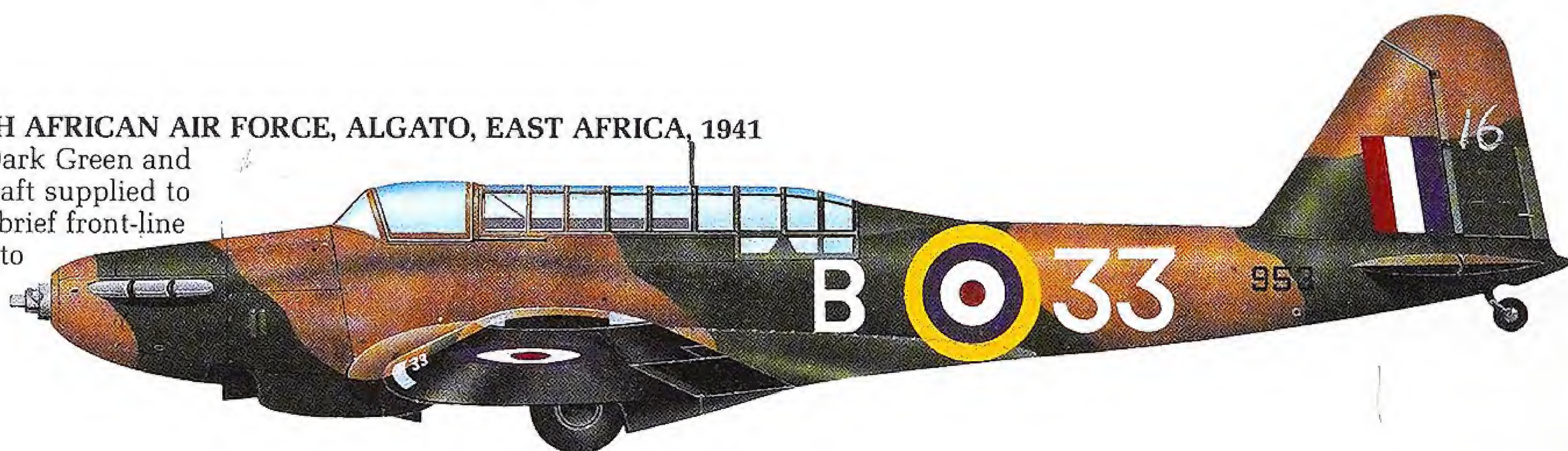
Mk 1, 106 SQUADRON, RAF ABINGDON, UK, AUGUST 1938

At this time RAF units proudly displayed their squadron number on the sides of the fuselage. However, within a year, the number had been replaced by a two-letter code which, for 106 Sqn, was XS.



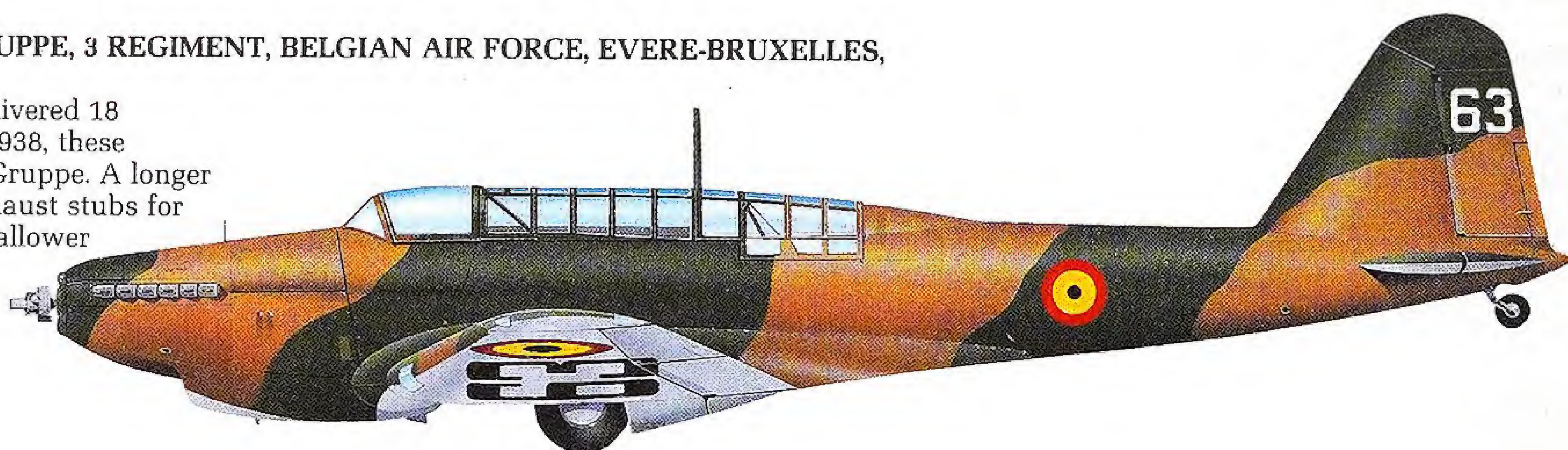
Mk 1, 15 SQUADRON, SOUTH AFRICAN AIR FORCE, ALGATO, EAST AFRICA, 1941

A B Pattern paint scheme of Dark Green and Dark Earth applied to an aircraft supplied to the SAAF. The Battle had only brief front-line service before being relegated to the training role.



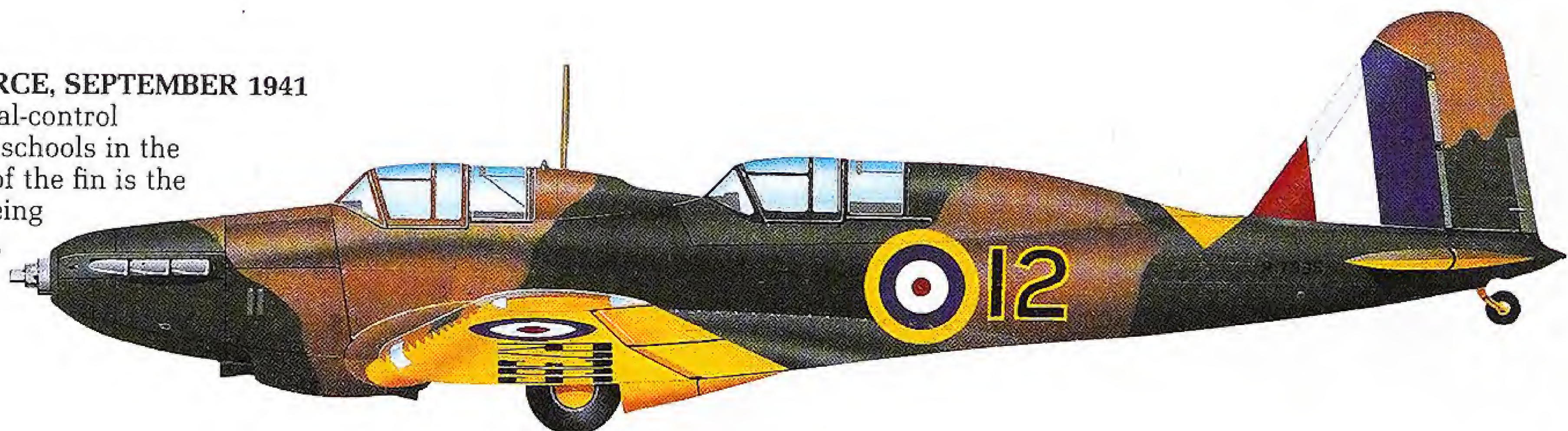
Mk 1, 5 ESCADRILLE, III GRUPPE, 3 REGIMENT, BELGIAN AIR FORCE, EVERE-BRUXELLES, MAY 1940

Avions Fairey at Gosselies delivered 18 aircraft to the Belgian AF in 1938, these equipping 5 and 7 Sqn of III Gruppe. A longer radiator cowl, different exhaust stubs for the Merlin III engine and a shallower rear canopy gave Belgian Battles a slightly better performance than their UK-built counterparts.



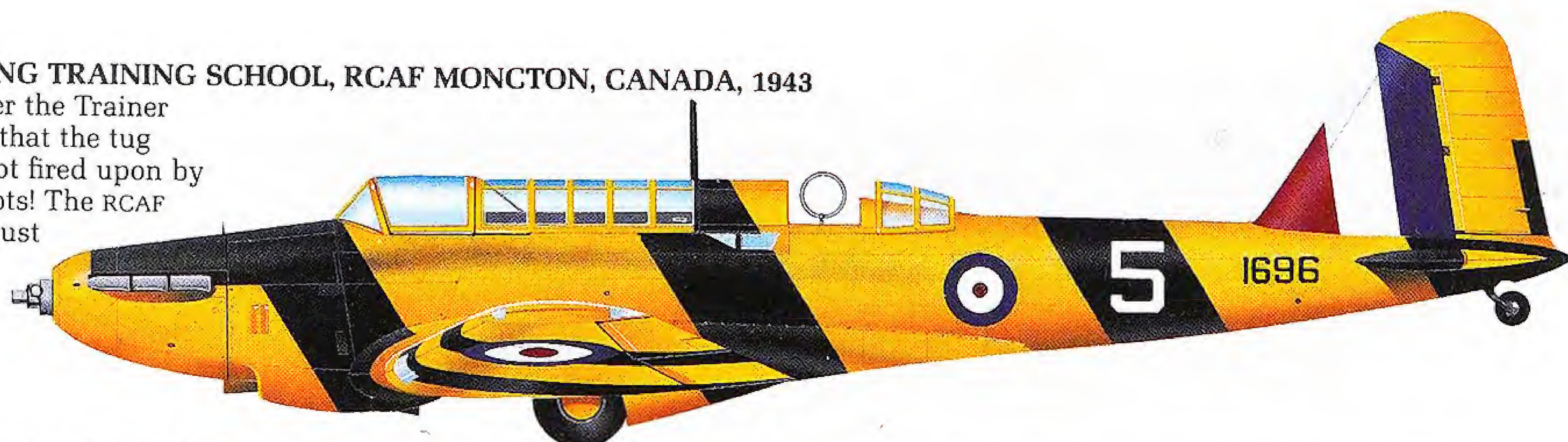
BATTLE (T), ROYAL AIR FORCE, SEPTEMBER 1941

This was one of a batch of dual-control trainers used by instructional schools in the UK and Canada. At the base of the fin is the "gas patch" which was still being applied to aircraft at this time, while in black on the rear fuselage is the serial R7365.



BATTLE (T), 8 SERVICE FLYING TRAINING SCHOOL, RCAF MONCTON, CANADA, 1943

Broad black bands painted over the Trainer Yellow finish served to ensure that the tug towing the sleeve target was not fired upon by over-zealous trainee fighter pilots! The RCAF received its first Battles in August 1939; 802 were eventually delivered.

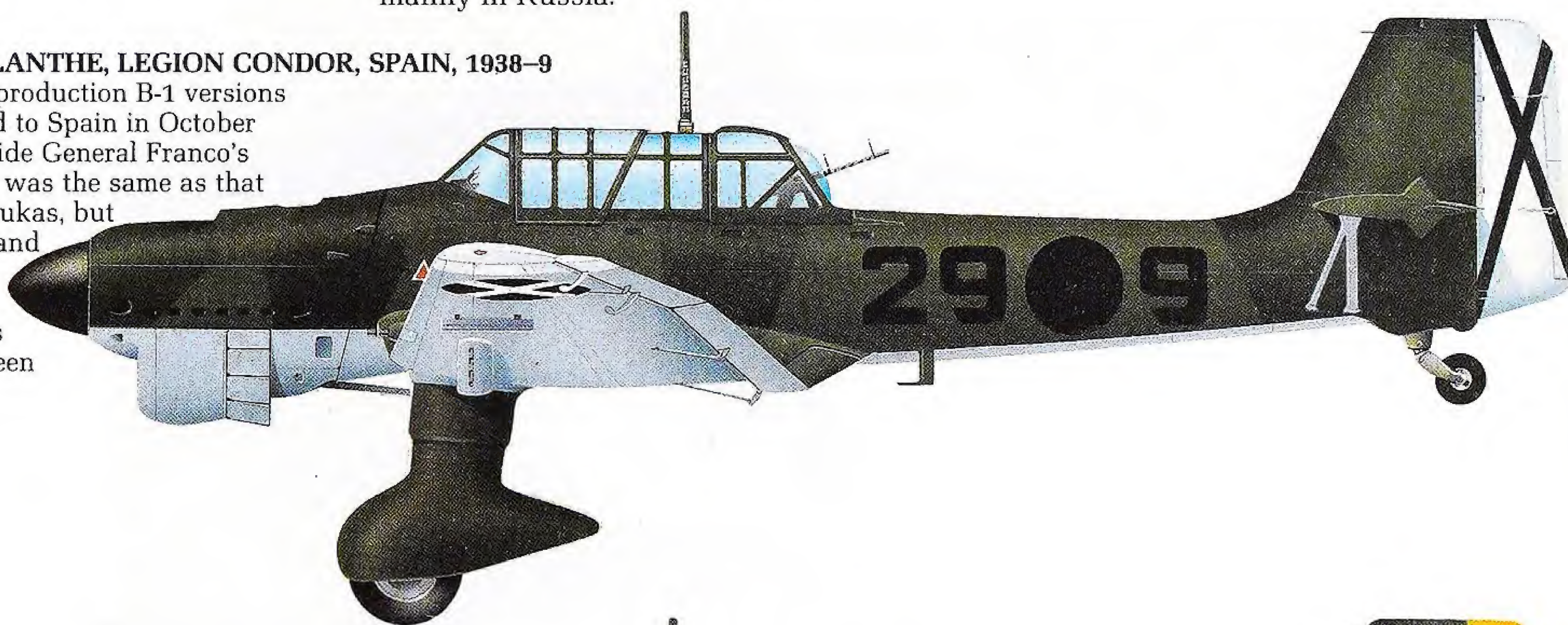


JUNKERS Ju 87

One of Germany's greatest propaganda weapons, the infamous Ju 87 Stuka (from *Sturzkampfflugzeug*, a term descriptive of all dive bombers) began the war as one of the most feared aircraft in the Luftwaffe. Its cranked wing and fixed, trousered undercarriage gave it a sinister predatory appearance. However, against fighter opposition it was highly vulnerable. The prototype first flew in 1935, with delivery of Ju 87As being made two years later. The improved Ju 87B series entered service just before World War II. Later in the war the D and G versions appeared and saw service mainly in Russia.

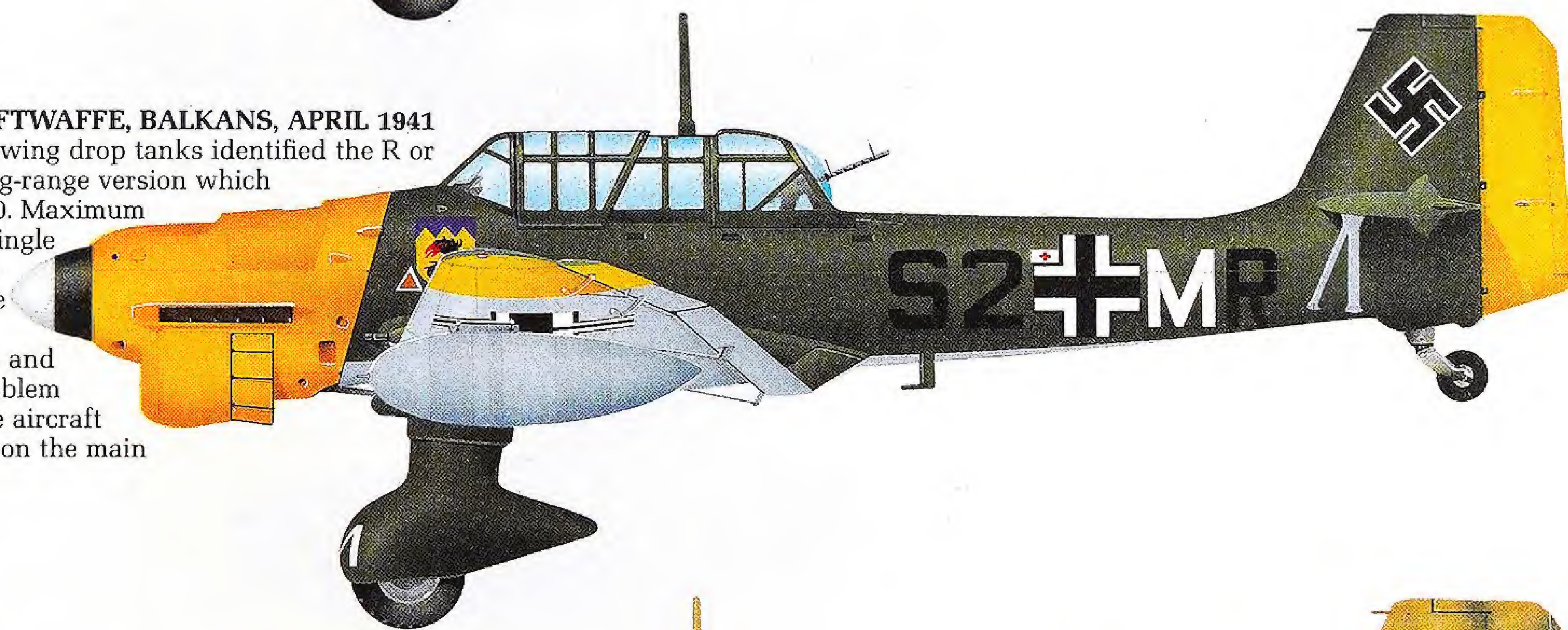
Ju 87B-1, STAFFEL JOLANTHE, LEGION CONDOR, SPAIN, 1938-9

One of five of the first production B-1 versions which were despatched to Spain in October 1938 for service alongside General Franco's forces. The camouflage was the same as that applied to Luftwaffe Stukas, but with Spanish insignia and coding. Wing top surface marking was often just a white cross painted on the dark green background color.



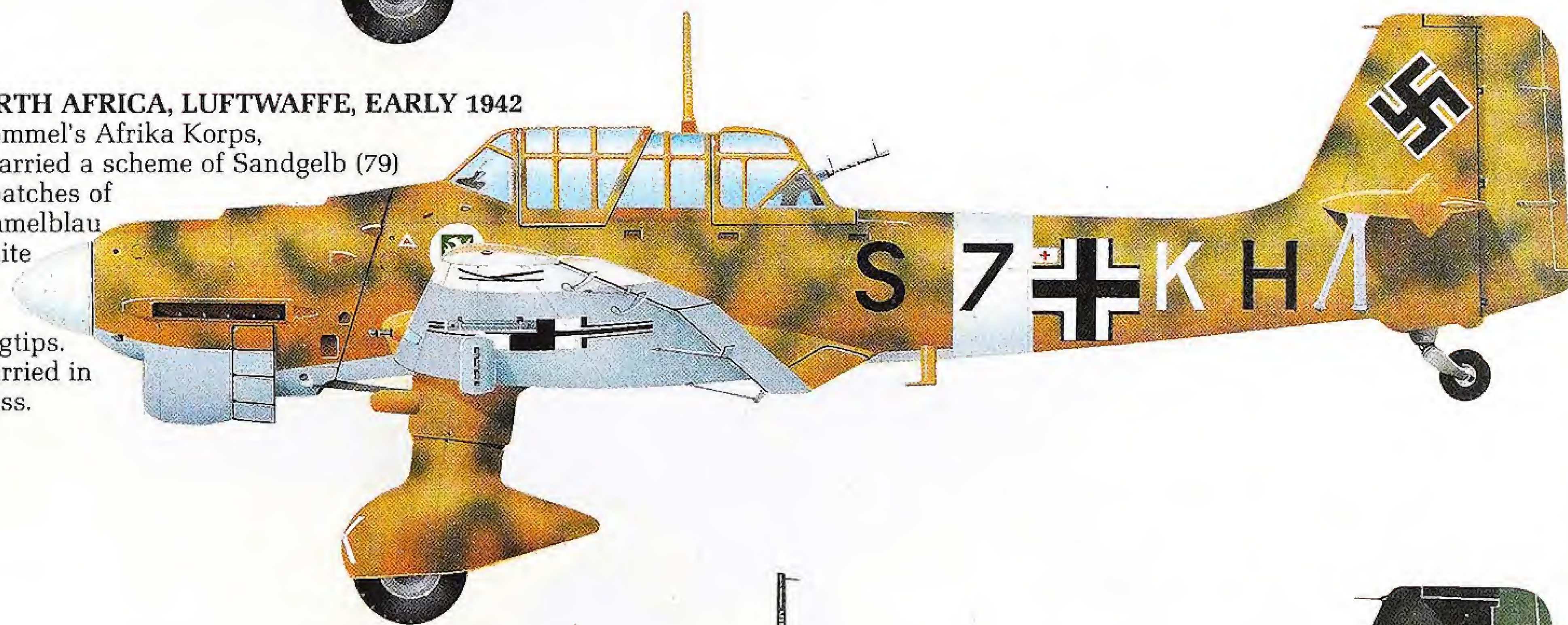
Ju 87R, 7./ST.G.77, LUFTWAFFE, BALKANS, APRIL 1941

Two 66 Imp gal underwing drop tanks identified the R or *Reichweite* (range) long-range version which entered service in 1940. Maximum offensive load was a single 551lb bomb under the fuselage. This example has theater markings (yellow cowl, wingtips and rudder) and Staffel emblem below the cockpit. The aircraft letter M was repeated on the main wheel fairings.



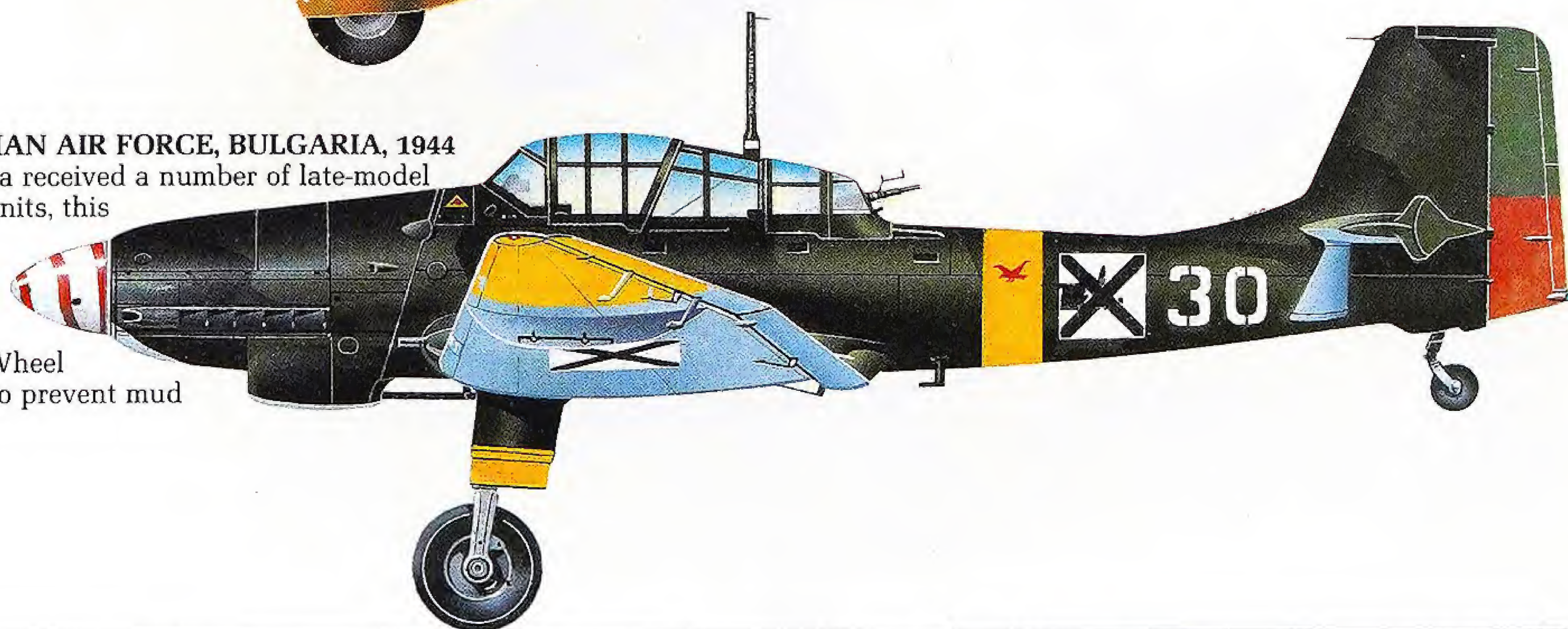
Ju 87B-2, 1./ST.G.3, NORTH AFRICA, LUFTWAFFE, EARLY 1942

Flying in support of Rommel's Afrika Korps, this aircraft probably carried a scheme of Sandgelb (79) mottled with sprayed patches of Olivegrün (80) and Himmelblau (78) undersurfaces. White theater markings around fuselage, spinner and under wingtips. A first aid pack was carried in the fuselage by the Cross.



Ju 87D-5, ROYAL BULGARIAN AIR FORCE, BULGARIA, 1944

As part of the Axis, Bulgaria received a number of late-model Stukas to equip its attack units, this example being flown on operations against anti-Royalist partisans. Extended wingtips were a feature of the D-5 version. Wheel spats were often detached to prevent mud clogging the undercarriage.

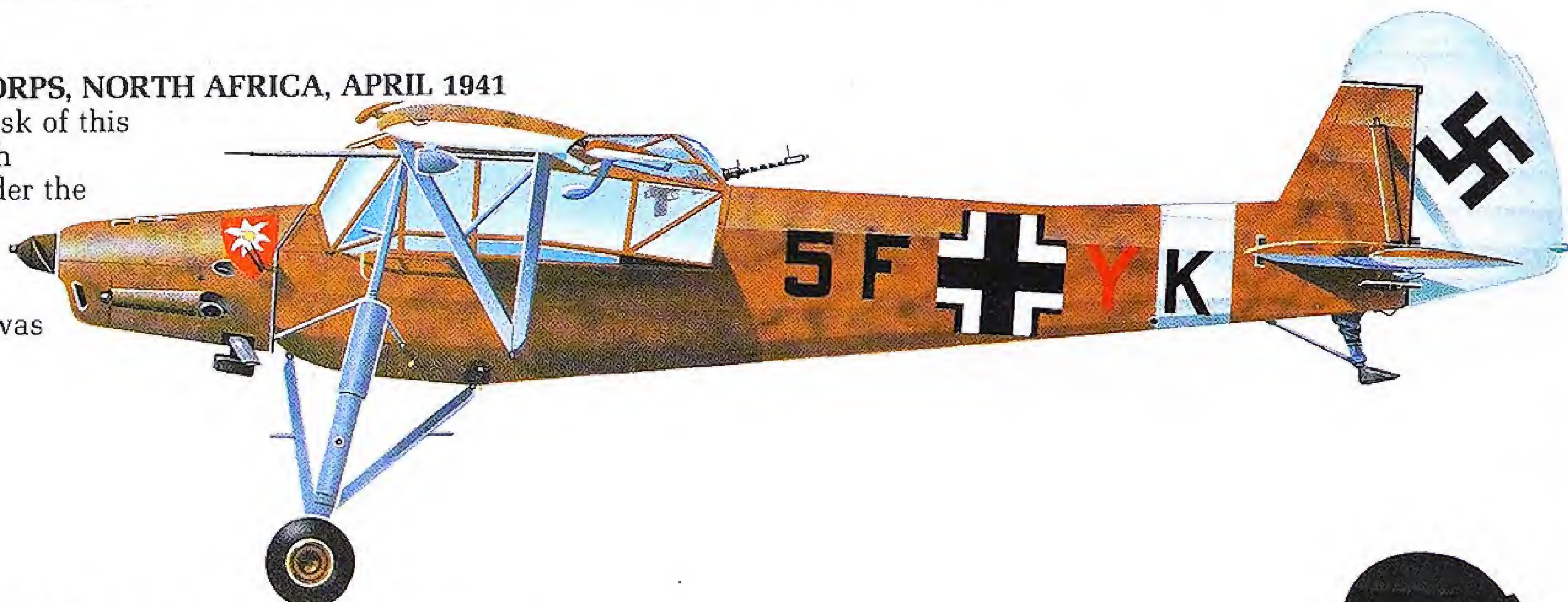


FIESELER Fi 156 STORCH

Of all the different types of communications aircraft designed to fly in and out of the smallest landing fields, the Storch (stork) came nearest to performing like a helicopter. It could land in almost the length of its wing span and the take-off was just as impressive. First flown in 1936, the Storch operated wherever the Wehrmacht fought throughout World War II. Production totaled 2549 aircraft. Versions included the Fi 156C-A and C-3 (staff transports), C-2 (recce), and D (ambulance).

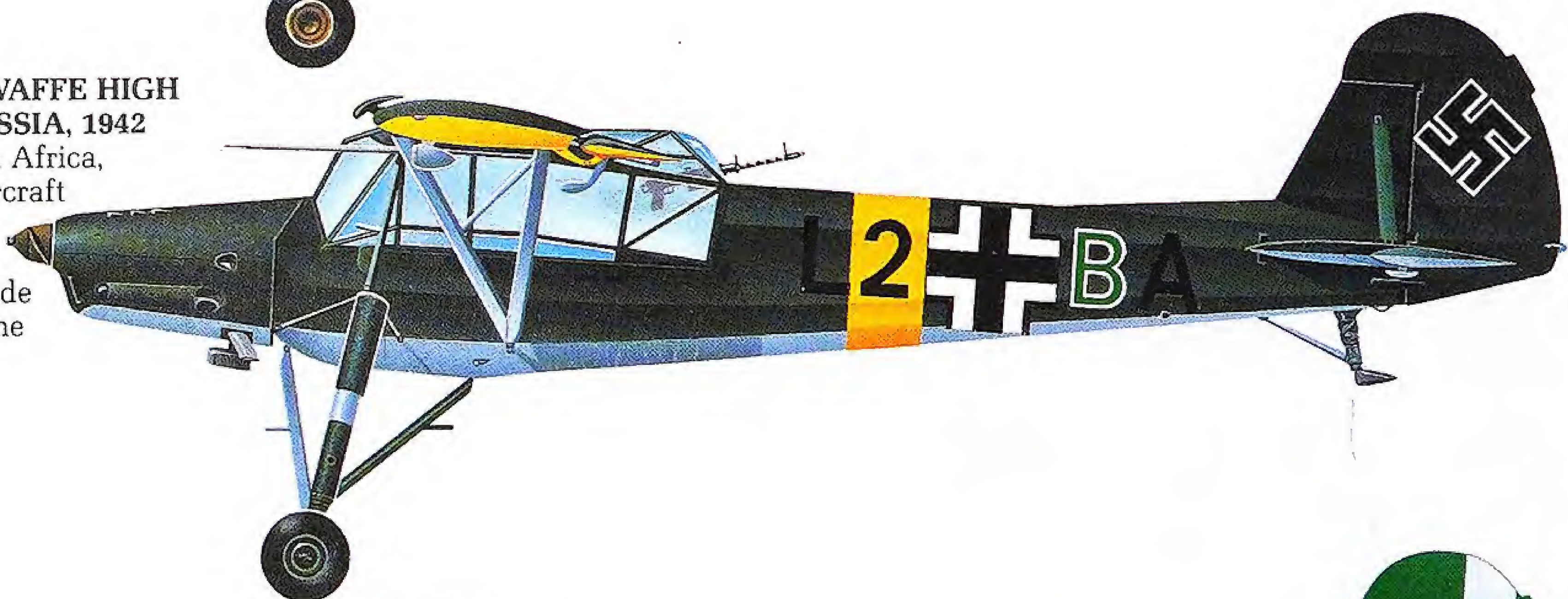
Fi 156C-3/TROP, 2.(H)/14 AFRIKA KORPS, NORTH AFRICA, APRIL 1941

Tank spotting duties was the main task of this aircraft camouflaged in Sandgelb with Hellblau undersides. White areas under the outboard wing sections, around the fuselage and covering the rudder were a feature of North Africa-based aircraft. The unit's Edelweiss badge was painted on the engine cowl.



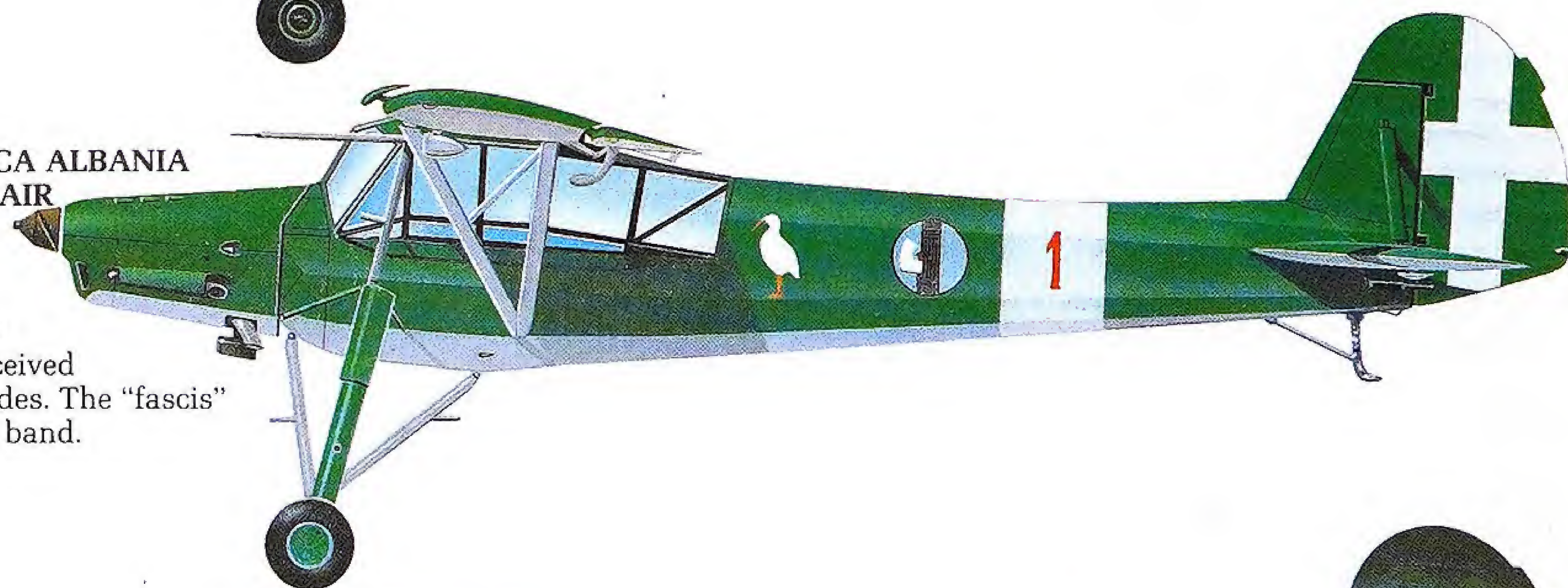
Fi 156C-3, KURIERSTAFFEL, LUFTWAFFE HIGH COMMAND, EASTERN FRONT, RUSSIA, 1942

As white was the identity marking in Africa, so yellow was the color applied to aircraft operating on the Russian Front. L2 was the code of Geschwaderstab of LG2, the letter B was the aircraft's code and A referred to the Staffel within the Geschwader.



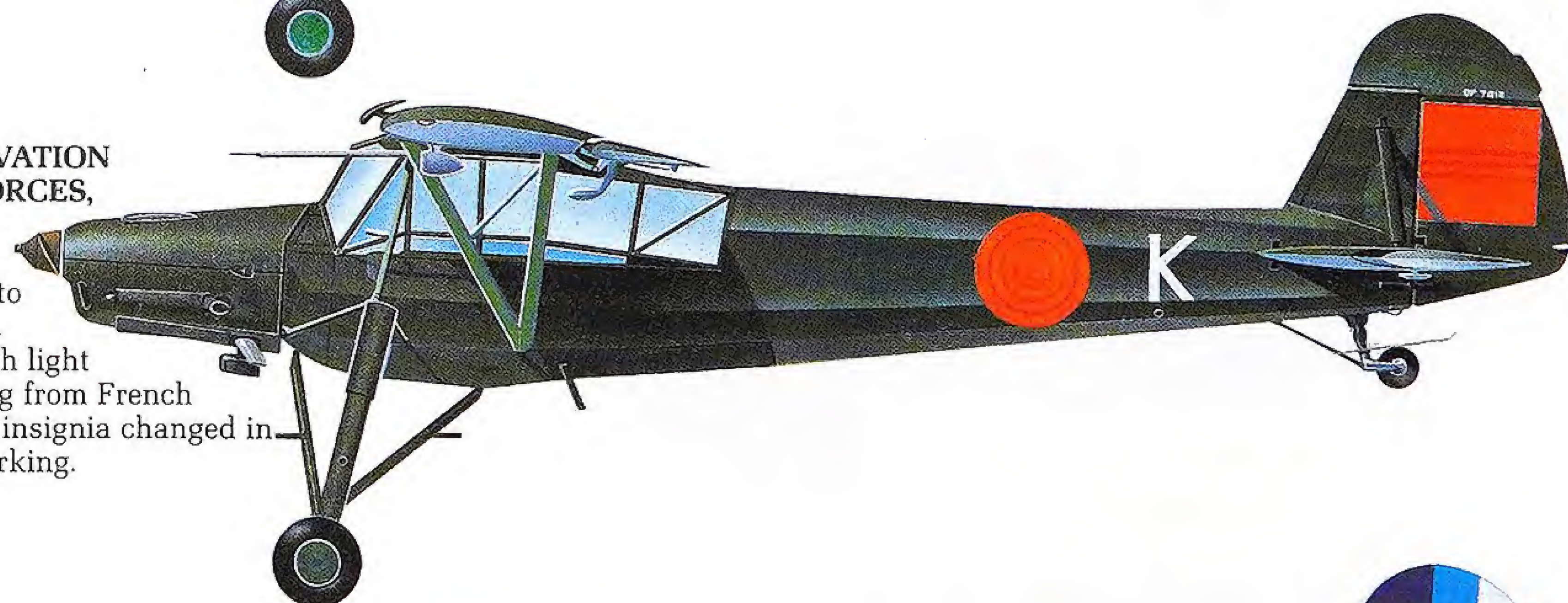
Fi 156C-5, COMANDO AERONAUTICA ALBANIA (REGIA AERONAUTICA), ITALIAN AIR FORCE, TIRANA, ALBANIA MARCH 1941

A number of Storch observation aircraft were supplied to the IAF and this example operating in Albania received a light green finish with gray undersides. The "fascis" emblem appears in front of the white band.



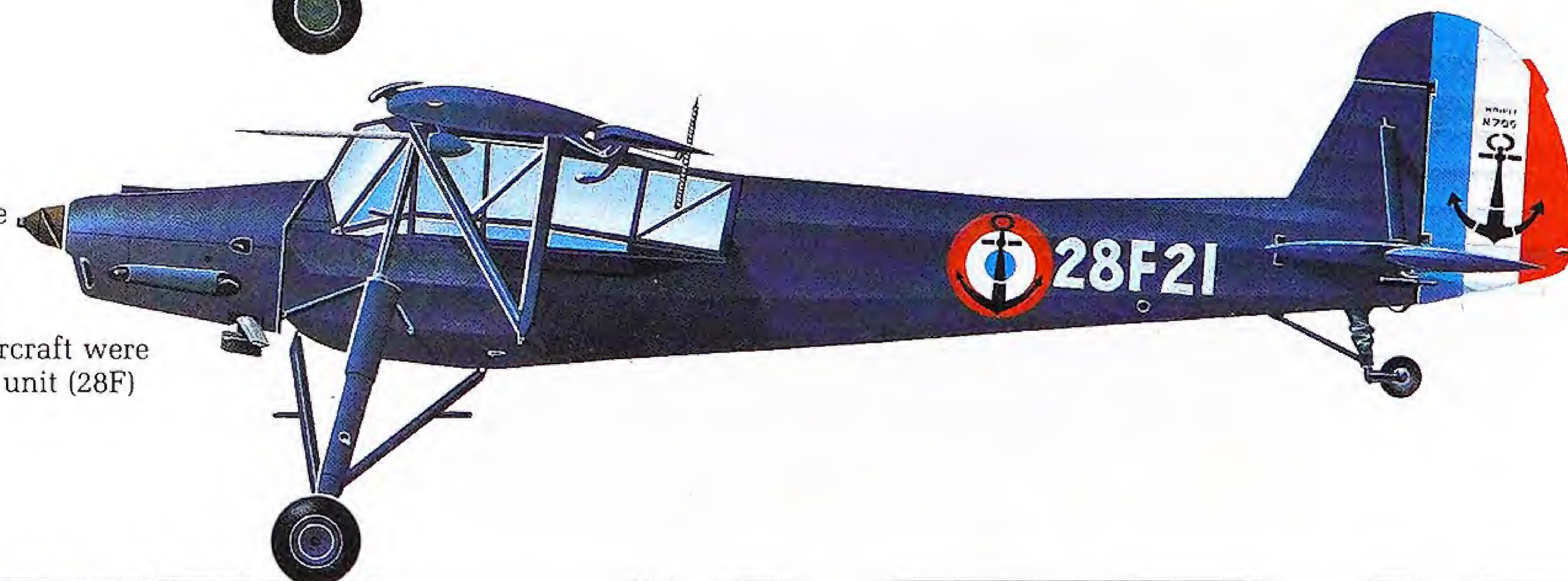
M.S.500 CRIQUET, 1ST AIR OBSERVATION SQUADRON, VIETNAM ARMED FORCES, NHATRANG, VIETNAM, 1951

A number of French-built Storchs known as Criquets were transferred to the embryo Vietnamese armed forces. Their camouflage was dark green with light blue undersides, the colors originating from French stocks. The concentric orange-yellow insignia changed in the mid-1950s to the star and bar marking.



M.S.501 CRIQUET, FLOTILLE 28F, AERONAVALE, FRANCE, 1949

French-built Storchs served with the Services for some years after the end of World War II. German production having been transferred to Occupied France and Czechoslovakia. Naval aircraft were finished a deep blue overall with the unit (28F) and aircraft number (21) clearly defined.

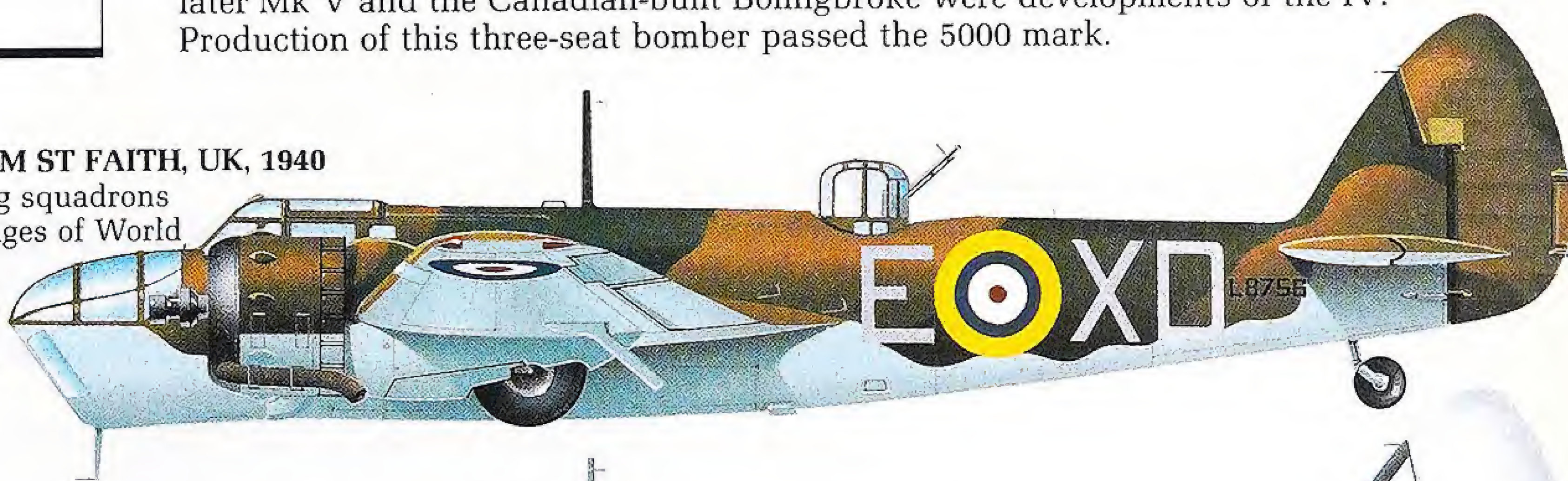


BRISTOL BLENHEIM IV

When the Blenheim Mk I first entered service in January 1937, it was faster than most of the then current biplane fighters. However, in two years it lost that advantage with the arrival of the monoplane fighters, and its daylight bomber missions early in World War II resulted in heavy losses. The Mk IV had a longer nose than the Mk I, and the later Mk V and the Canadian-built Bolingbroke were developments of the IV. Production of this three-seat bomber passed the 5000 mark.

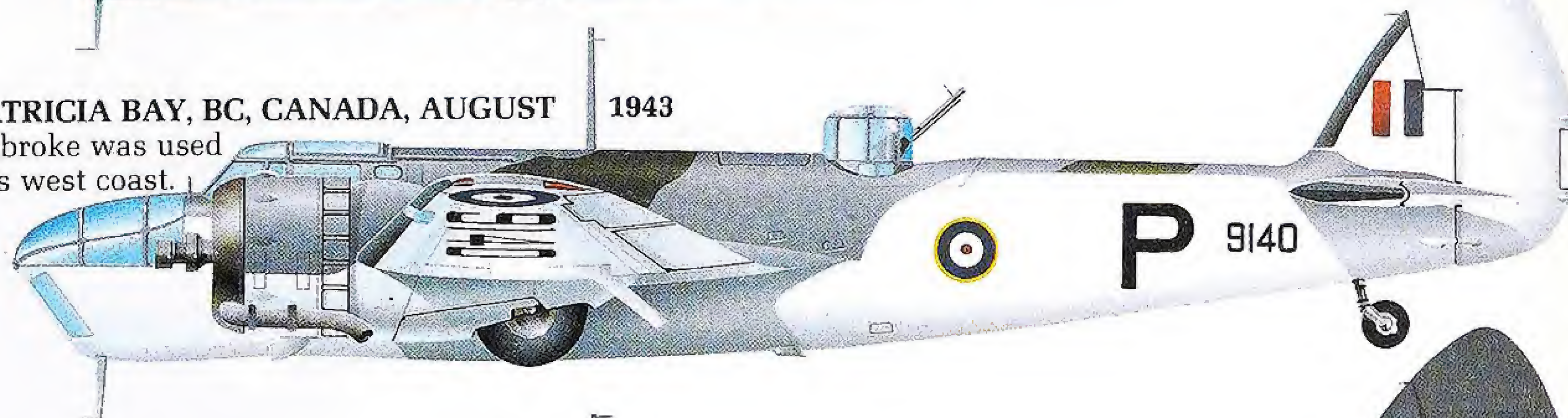
Mk IV, 139 SQUADRON, RAF HORSHAM ST FAITH, UK, 1940

The Blenheim-equipped daylight bombing squadrons suffered major losses during the early stages of World War II. However, one survivor was this machine which was relegated to training duties until it was withdrawn from service in 1944. Colors were Dark Green, Dark Earth and Sky under sides.



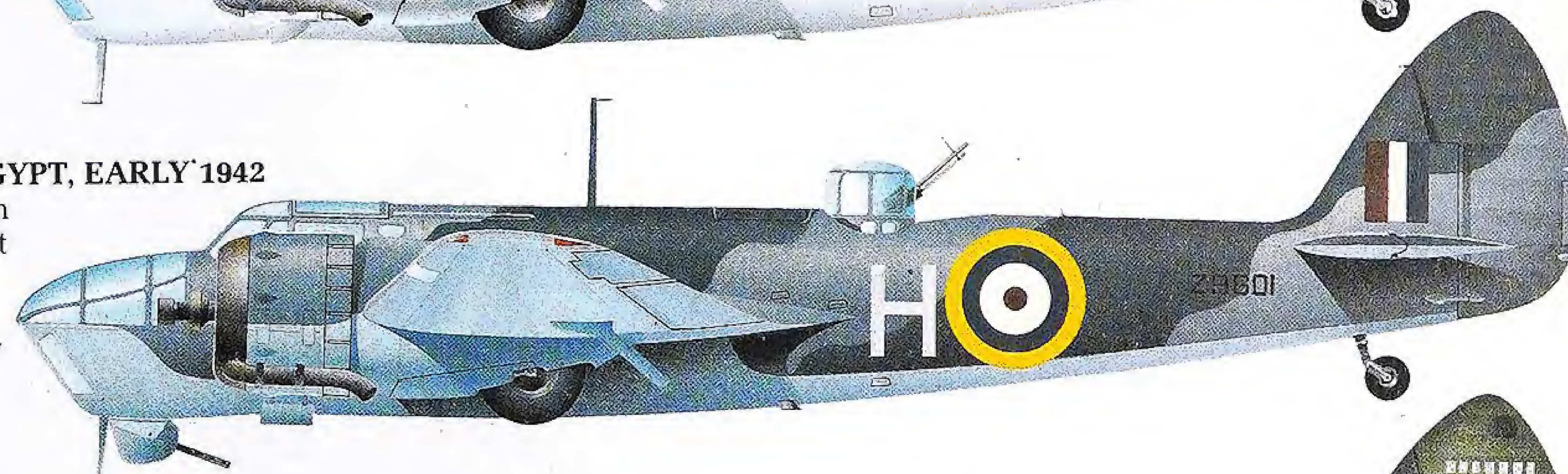
Mk IV, 115 (BR) SQUADRON, RCAF, PATRICIA BAY, BC, CANADA, AUGUST 1943

Serialized 9140, this Canadian-built Bolingbroke was used for maritime patrol duties along Canada's west coast. It bears a similar scheme to the RAF Coastal Command aircraft of this period.



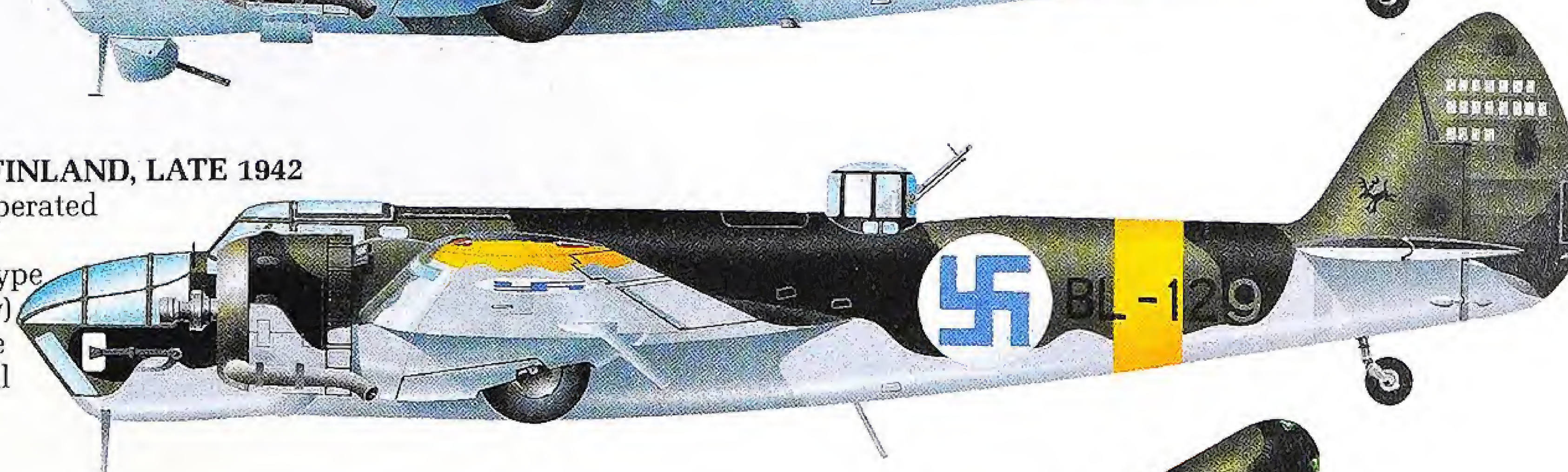
Mk IV, 55 SQUADRON, RAF, FUKA, EGYPT, EARLY 1942

An unusual Mediterranean blue finish on a Western Desert-based aircraft. The unit was one of the last to fly the type in this theater, eventually exchanging the Mk IVs for Martin Baltimores in May 1942.

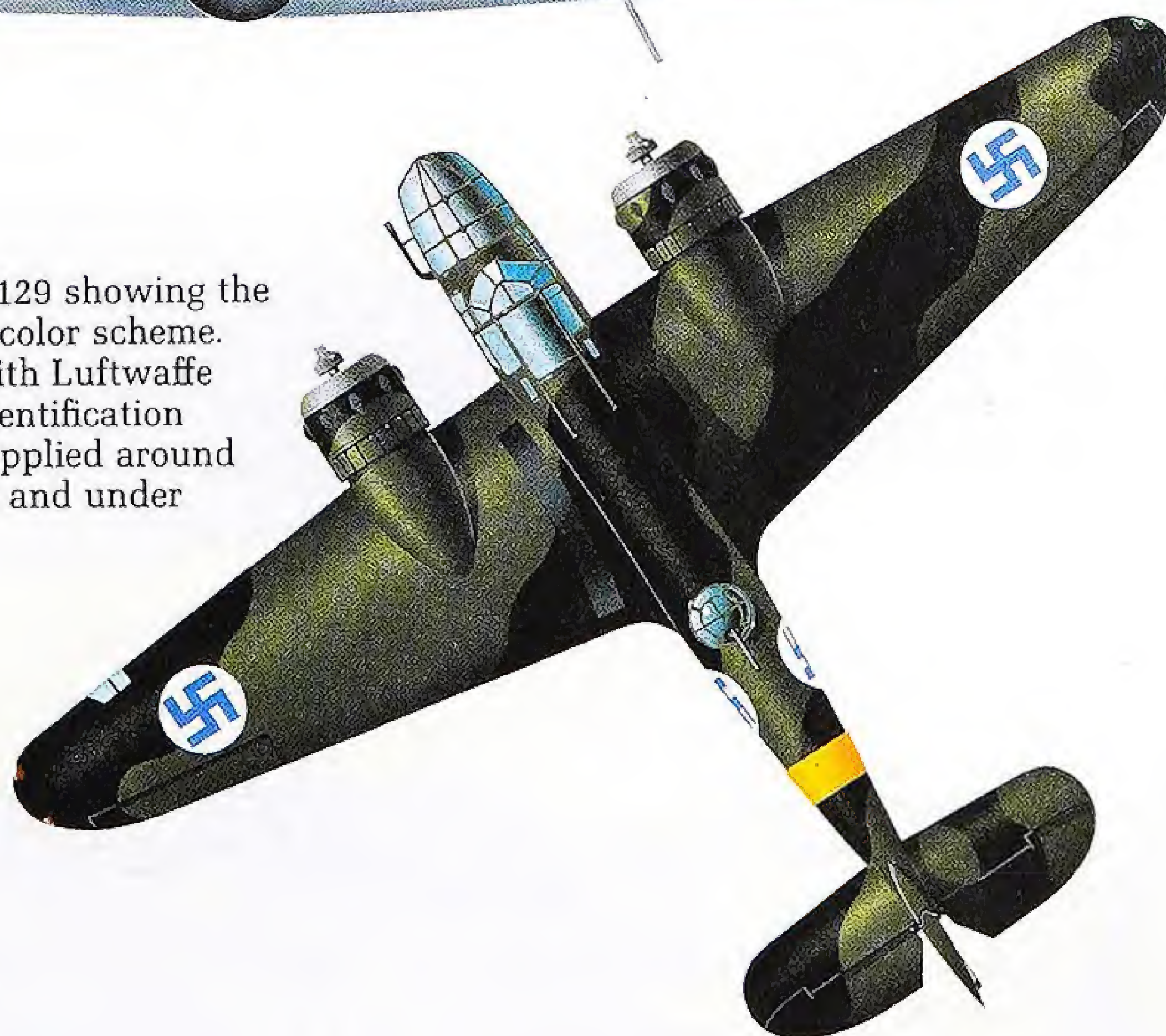


Mk IV LeLv 42, FINNISH AIR FORCE, FINLAND, LATE 1942

Both Mk I and Mk IV Blenheims were operated by Finland during the 1940 Winter War and the 1941-4 Continuation War. The type was nicknamed 'Pelti Heikki' (Tin Henry) and the later version remained in service until 1957. The mission marks on the tail of this example were applied only on the port side.



Plan view of BL-129 showing the black and green color scheme. In accordance with Luftwaffe orders, yellow identification markings were applied around the rear fuselage and under the wingtips.



Mk IVT, BOMBING & GUNNERY SCHOOLS, NO 1 TRAINING COMMAND, RCAF, 1944

Built as one of the final batch of Bolingbroke IVTs, 10054 was completed as a general purpose trainer and operated as a target tug. Fairchild Aircraft Ltd, of Longueuil, Quebec, produced a total of 656 Bolingbrokes of all marks.



A.W. WHITLEY

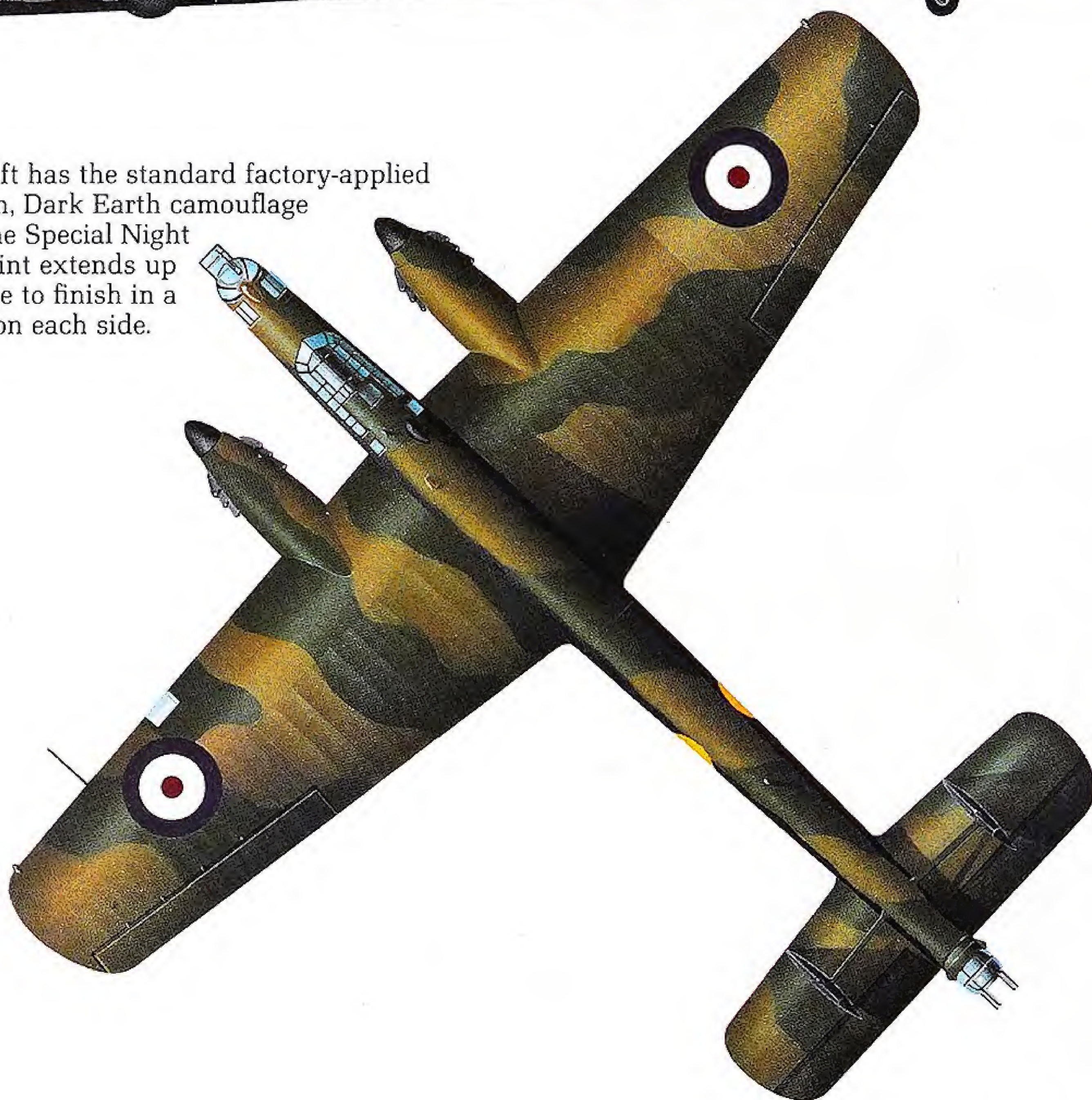
The Armstrong Whitworth Whitley was the first of the trio of heavy bombers with which RAF Bomber Command went to war in 1939 (the others were the Wellington and Hampden). Used solely for night operations, the Whitley had a slow top speed of 192mph at 14,300ft, although it possessed sufficient range to bomb targets in northern Italy from bases in Britain. Later versions served with Coastal Command. Production totaled 1824.

Mk IV, 10 SQUADRON, RAF DISHFORTH, UK, 1938

After 1939 the PB squadron code was changed to ZA. Underwing white serials were 45in high, and the fuselage serials, 8in high. The serial number is repeated on the rudder fin.



This aircraft has the standard factory-applied Dark Green, Dark Earth camouflage pattern. The Special Night (RDM2) paint extends up the fuselage to finish in a wavy line on each side.



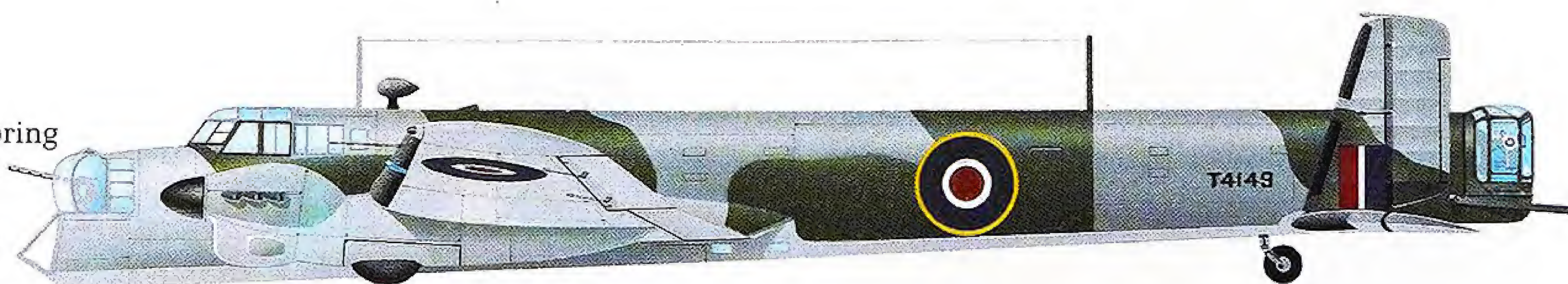
Mk V, 78 SQUADRON, RAF DISHFORTH, UK, 1941

In this all-black version the original Type A1 roundel has been modified to a C1 and the individual aircraft letter (Y) has been made more prominent. The serials are now white and placed on the fuselage.



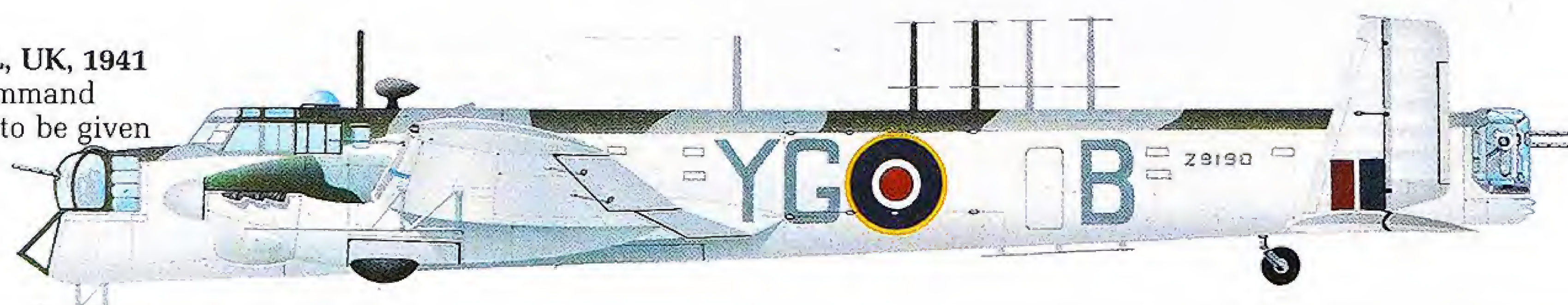
Mk V, RAF, 1942

Retired from bomber operations in the spring of 1942, Whitleys undertook other duties including leaflet, supply and agent dropping. This uncoded Mk V is painted in the official temperate land camouflage scheme of World War II. Its serial is painted black.



Mk VII, 502 SQUADRON, RAF ST EVAL, UK, 1941

From 10 August 1941 all RAF Coastal Command Whitleys (and other types) were ordered to be given white undersurfaces and sides with Dark Slate Gray and Extra Dark Sea Gray on surfaces viewed from immediately above.

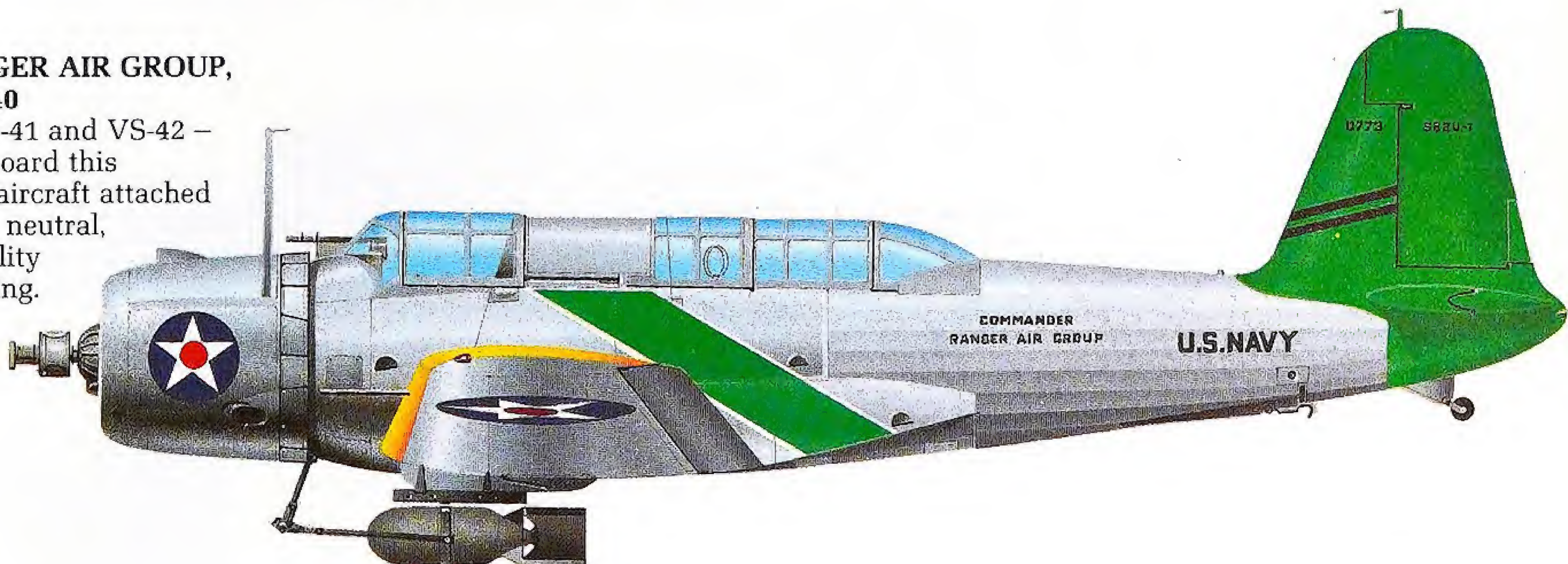


VOUGHT SB2U VINDICATOR

The impressive-looking prototype XSB2U-1 scout-bomber first flew on 4 January 1936, and Navy trials showed it to be a significant step forward in carrier-based aircraft. A cantilever monoplane equipped with folding outer wings for ship stowage, the aircraft began to join US Navy units at the end of 1937. It was followed by the improved -2 and -3, the latter being the only version to carry the name Vindicator. Its combat career was brief, with a courageous action at Midway finally confirming its general obsolescence. Both Britain and France received batches, the former giving it the name Chesapeake.

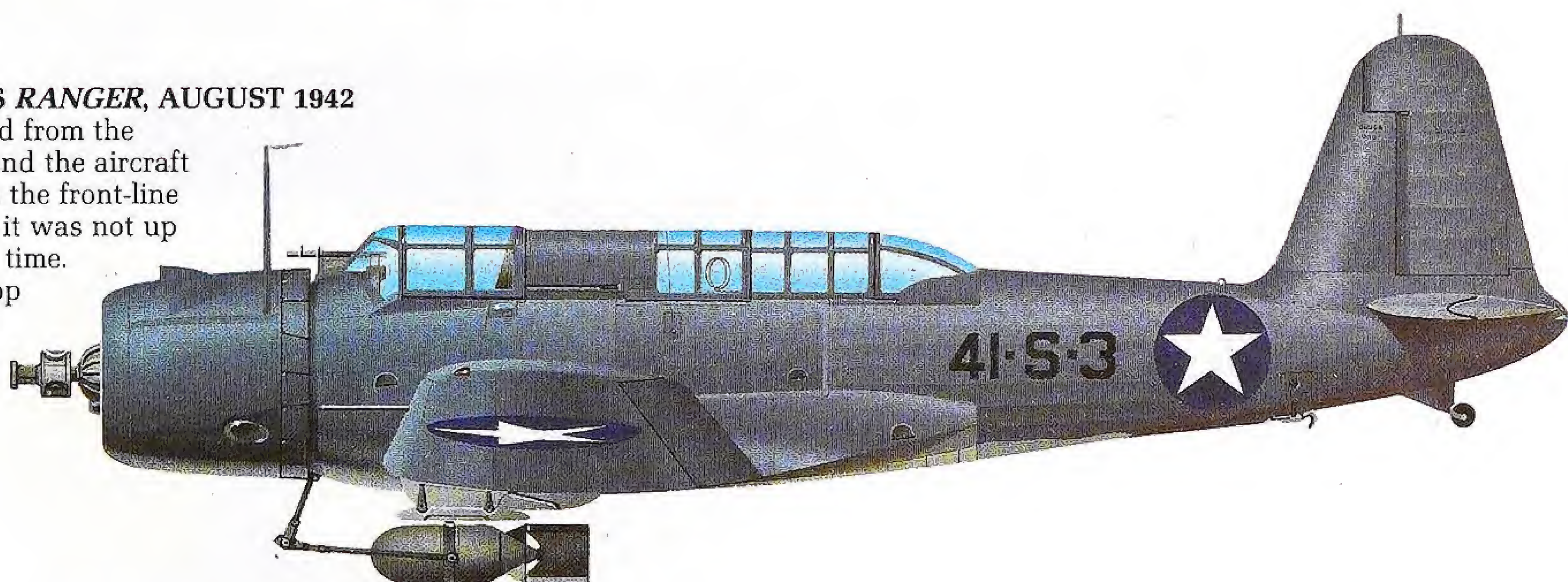
SB2U-1, COMMANDER RANGER AIR GROUP, US NAVY, USS *RANGER*, 1940

In 1940 three units – VB-4, VS-41 and VS-42 – were equipped with SB2Us aboard this carrier, green tails identifying aircraft attached to the ship. With America still neutral, the aircraft displayed a neutrality patrol star on the engine cowling. The black stripes on the fin are landing assistance lines for carrier use.



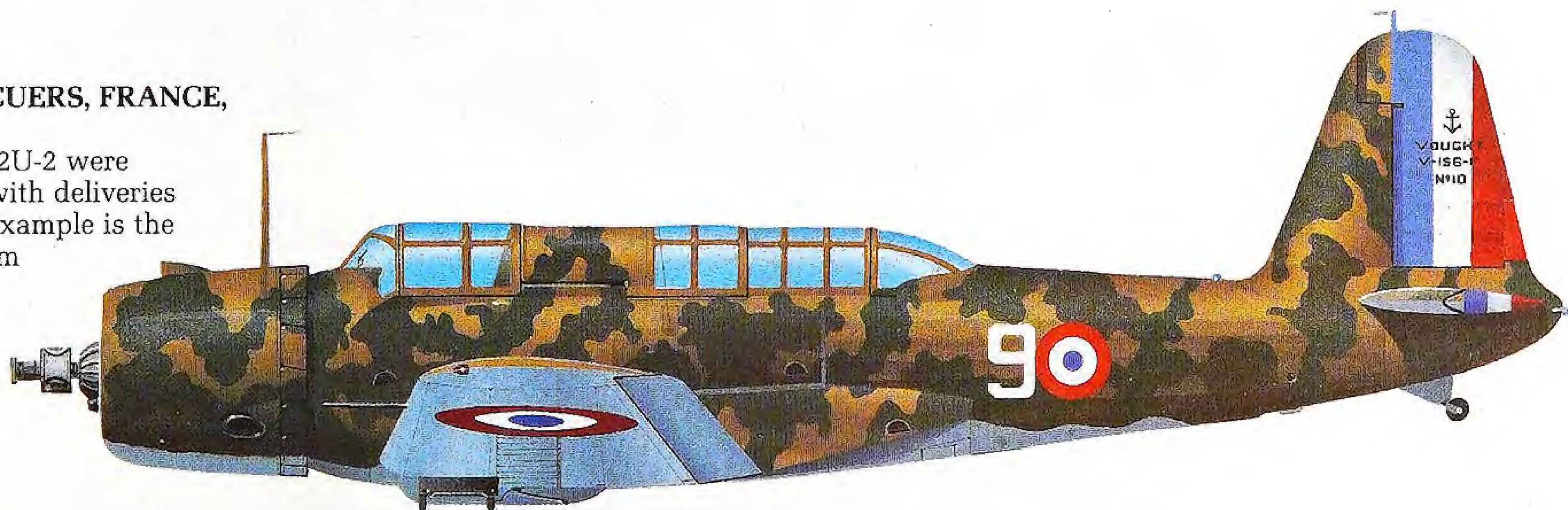
SB2U-1, VS-41, US NAVY, USS *RANGER*, AUGUST 1942

The red center had been deleted from the national insignia by this time and the aircraft itself was about to depart from the front-line scene as the USN accepted that it was not up to the combat standards of the time. The Non-Specular Blue Gray top surface color was also applied to the underside of the outer, folding wing panels.



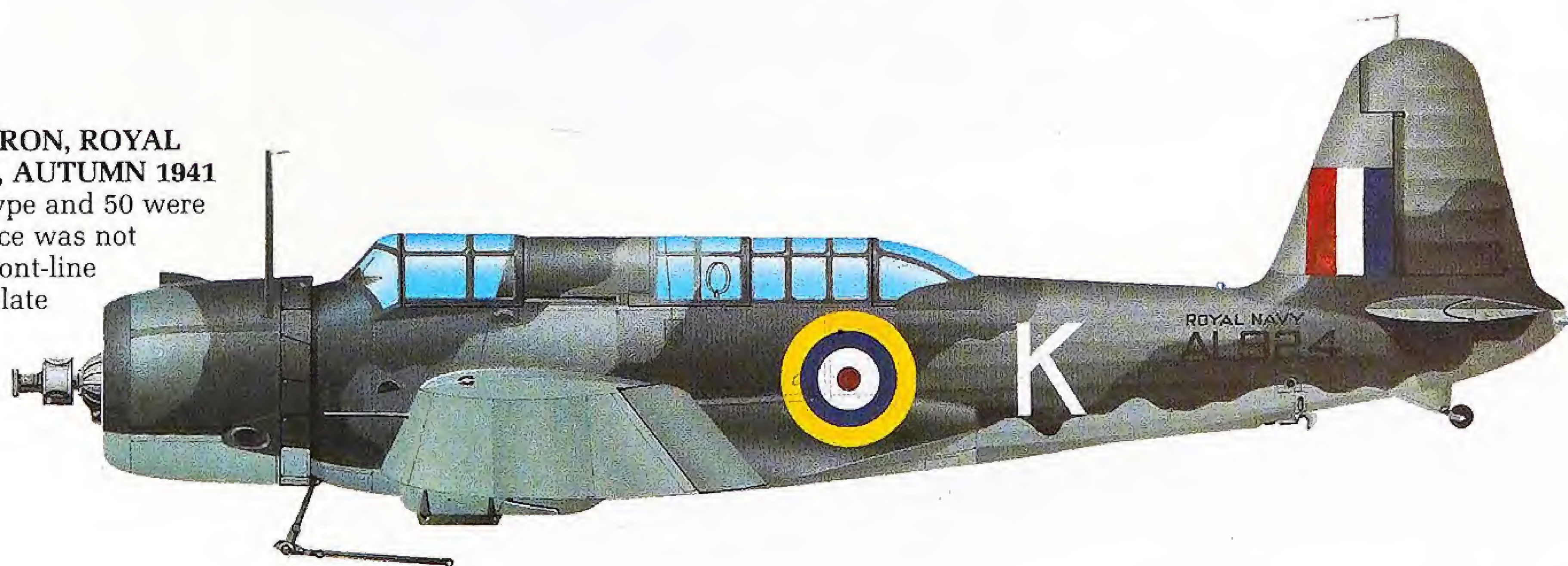
V-156-F, ESCADRILLE AB3, CUERS, FRANCE, JULY 1940

Forty of this version of the SB2U-2 were ordered by the French Navy, with deliveries beginning in June 1939. This example is the tenth built and wears a random disruptive green and brown camouflage. The tricolor flash was also applied to the top and bottom surfaces of the elevators.



CHESAPEAKE I, 811 SQUADRON, ROYAL NAVY, LEE-ON-SOLENT, UK, AUTUMN 1941

The British, too, ordered the type and 50 were delivered, but their performance was not considered good enough for front-line use. Color scheme was Dark Slate Gray (a gray-green color) and Extra Dark Sea Gray with Sky undersides.

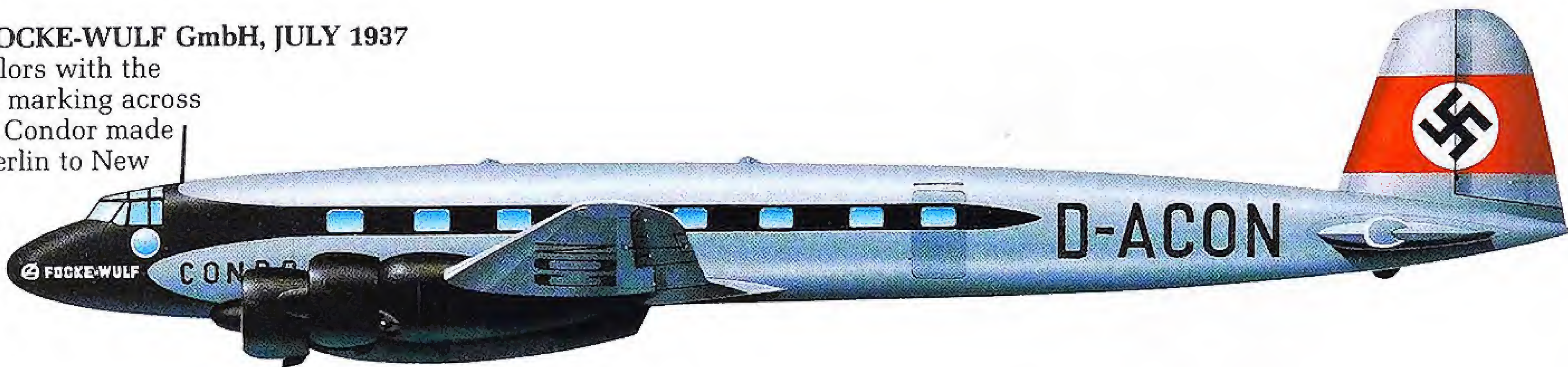


FOCKE- WULF Fw 200

Labeled the 'scourge of the Atlantic' by Winston Churchill, the German Condors posed a menace to the UK out of all proportion to their numbers. Originally designed as a 26-passenger airliner and making its first flight in July 1937, the Condor was developed into a long-range commerce raider and reconnaissance aircraft, entering service in the summer of 1940. The advent of longer-range Coastal Command aircraft and CAM (catapult-armed merchantman) fighters finally eliminated their threat and survivors of the 276 built reverted to a transport role.

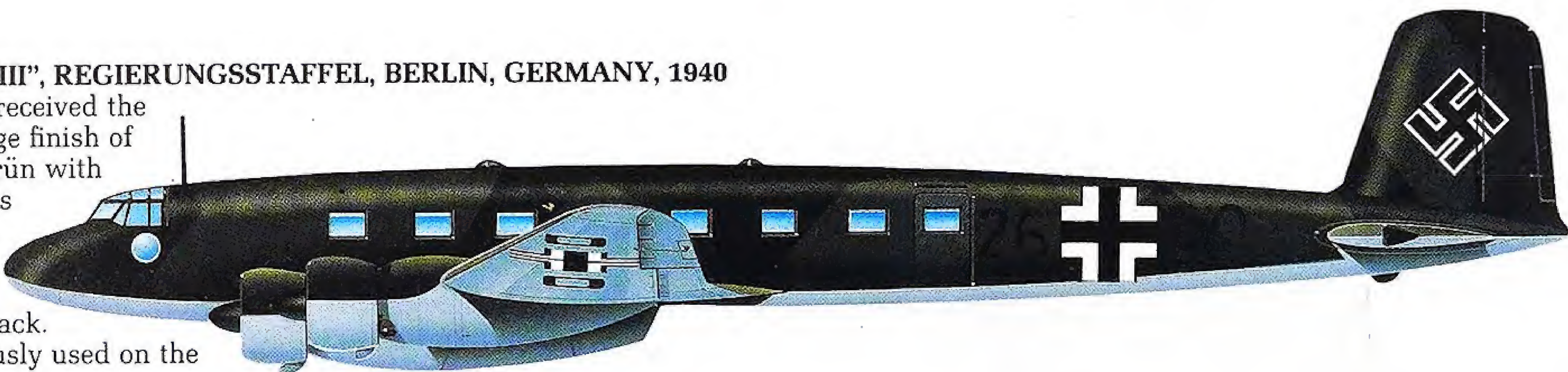
Fw 200V1, PROTOTYPE, FOCKE-WULF GmbH, JULY 1937

Finished in the company colors with the National Socialist Swastika marking across the fin and rudder, the first Condor made an impressive flight from Berlin to New York on 10 August 1938, prompting Danish Airlines (DDL) to order two aircraft.



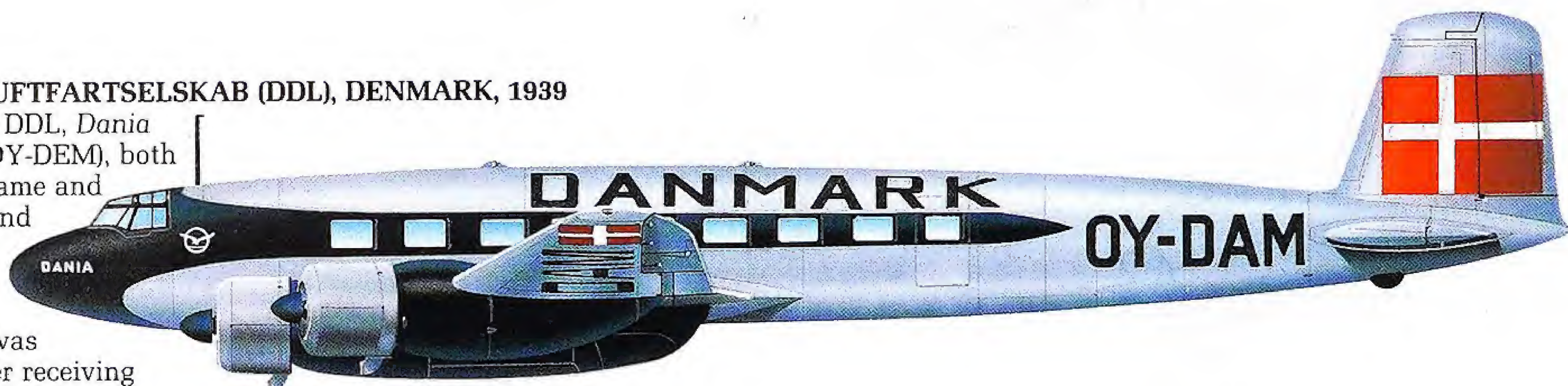
Fw 200V3, "IMMELMANN III", REGIERUNGSSTAFFEL, BERLIN, GERMANY, 1940

Hitler's personal transport received the standard bomber camouflage finish of Schwarzgrün and Dunkelgrün with Hellblau undersides. Hitler's compartment featured a large armored seat placed over an escape hatch and incorporated a parachute pack. The 26-00 code was previously used on the Führer's Ju 52s.



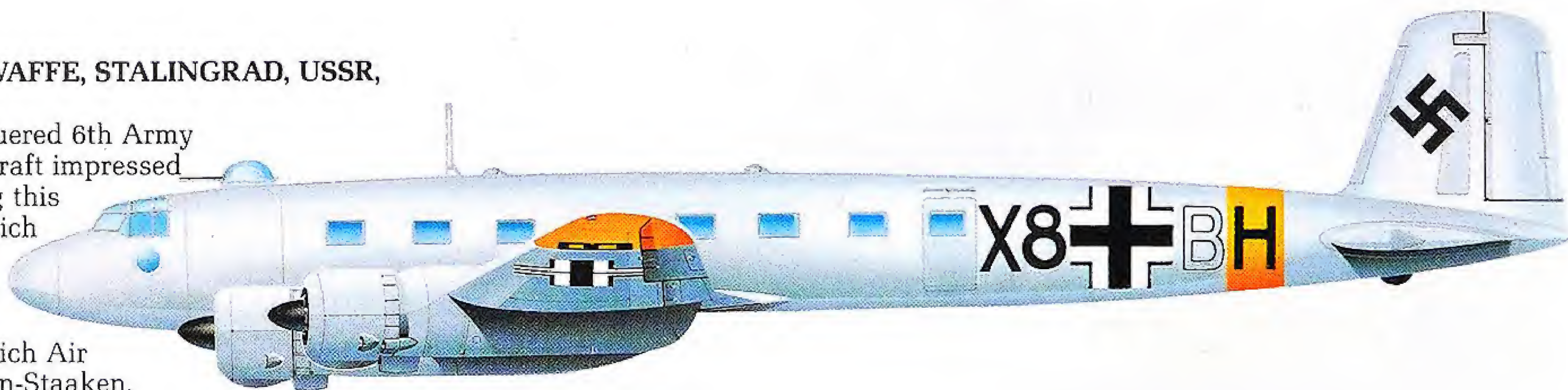
Fw 200A, DET DANSKE LUFTFARTSELSKAB (DDL), DENMARK, 1939

Two aircraft operated with DDL, *Dania* (OY-DAM) and *Jutlandia* (OY-DEM), both marked with the country name and the Danish flag on the fin and wings during the final months of peace. When Denmark was invaded, *Dania* flew to the UK and was impressed as G-AGAY, later receiving the RAF serial DX177.



Fw 200C-0, 1/KG 40, LUFTWAFFE, STALINGRAD, USSR, JANUARY 1943

Supply flights to the beleaguered 6th Army found large numbers of aircraft impressed into the operation, including this armed transport version which received a coat of "winter white" over the dark green upper surfaces. It was normally attached to the Reich Air Ministry Pool based at Berlin-Staaken.



Fw 200C-8, III/KG 40, LUFTWAFFE, BORDEAUX-MARIGNAC, FRANCE, 1944

The last production variant was equipped with FuG 200 Hohentwiel search radar in the nose and a Henschel Hs293 anti-ship missile under each wing. Few successes were achieved by this combination and the type reverted to its original role – that of transportation.

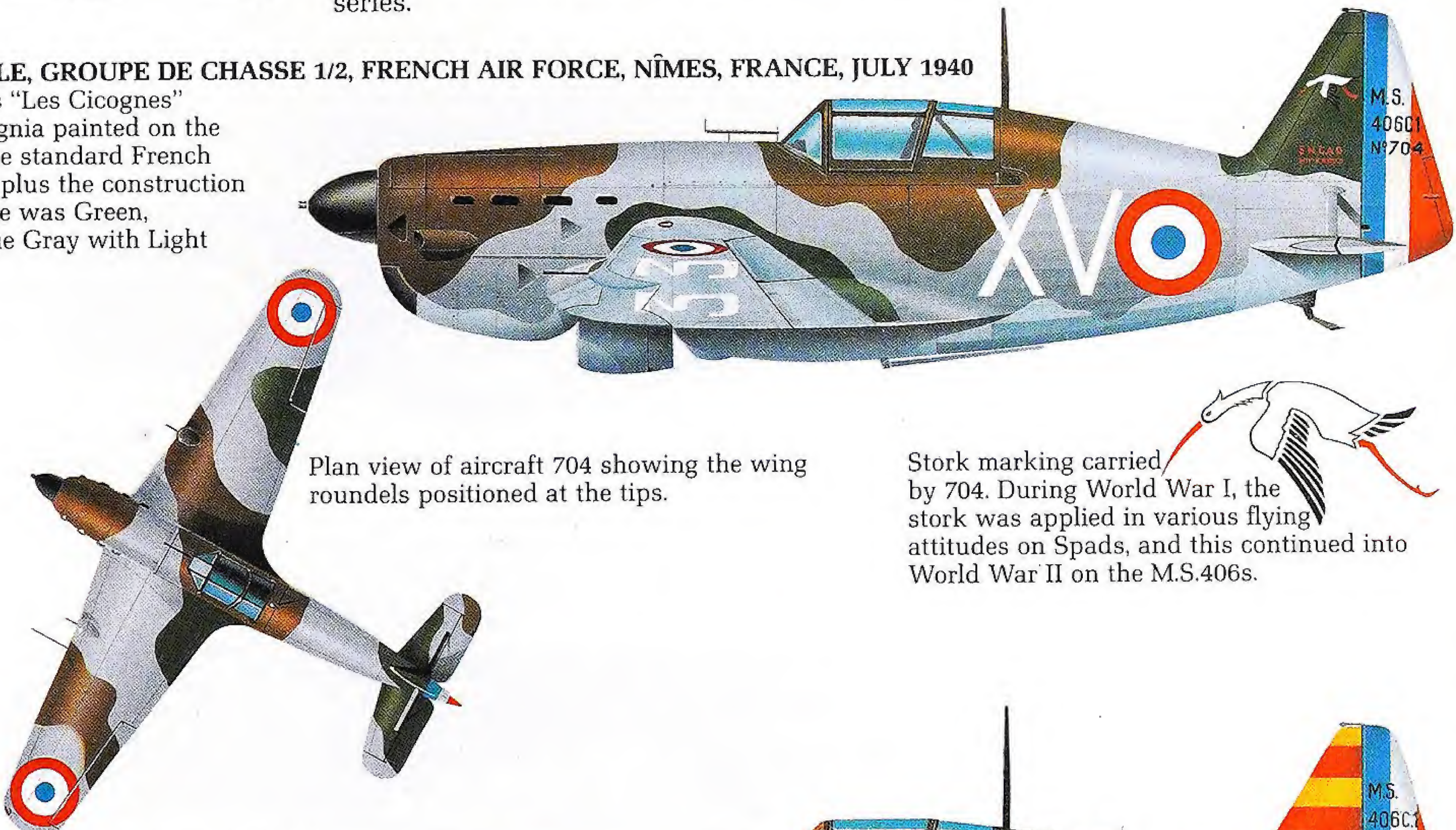


MORANE-SAULNIER M.S.406

Derived from a 1934 prototype, the M.S.406 was outclassed by the Luftwaffe's Bf 109s at the beginning of World War II. Although sturdy and highly maneuverable, it was too slow, had poor armament (one 20mm cannon and two 7.5mm machine guns) and an inferior engine (860hp Hispano-Suiza). It was, however, available, and 573 equipped 12 French Groupes de Chasse in September 1939. Finland used the type from 1940 to 1952; a development of the earlier M.S.405 gave rise to the Swiss D-3800 series.

M.S.406C1, 1 ESCADRILLE, GROUPE DE CHASSE 1/2, FRENCH AIR FORCE, NÎMES, FRANCE, JULY 1940

An aircraft of the famous "Les Cicognes" (Stork) unit with the insignia painted on the fin. The rudder carries the standard French aircraft type designation plus the construction number (704). Camouflage was Green, Dark Earth and Dark Blue Gray with Light Blue Gray undersides.

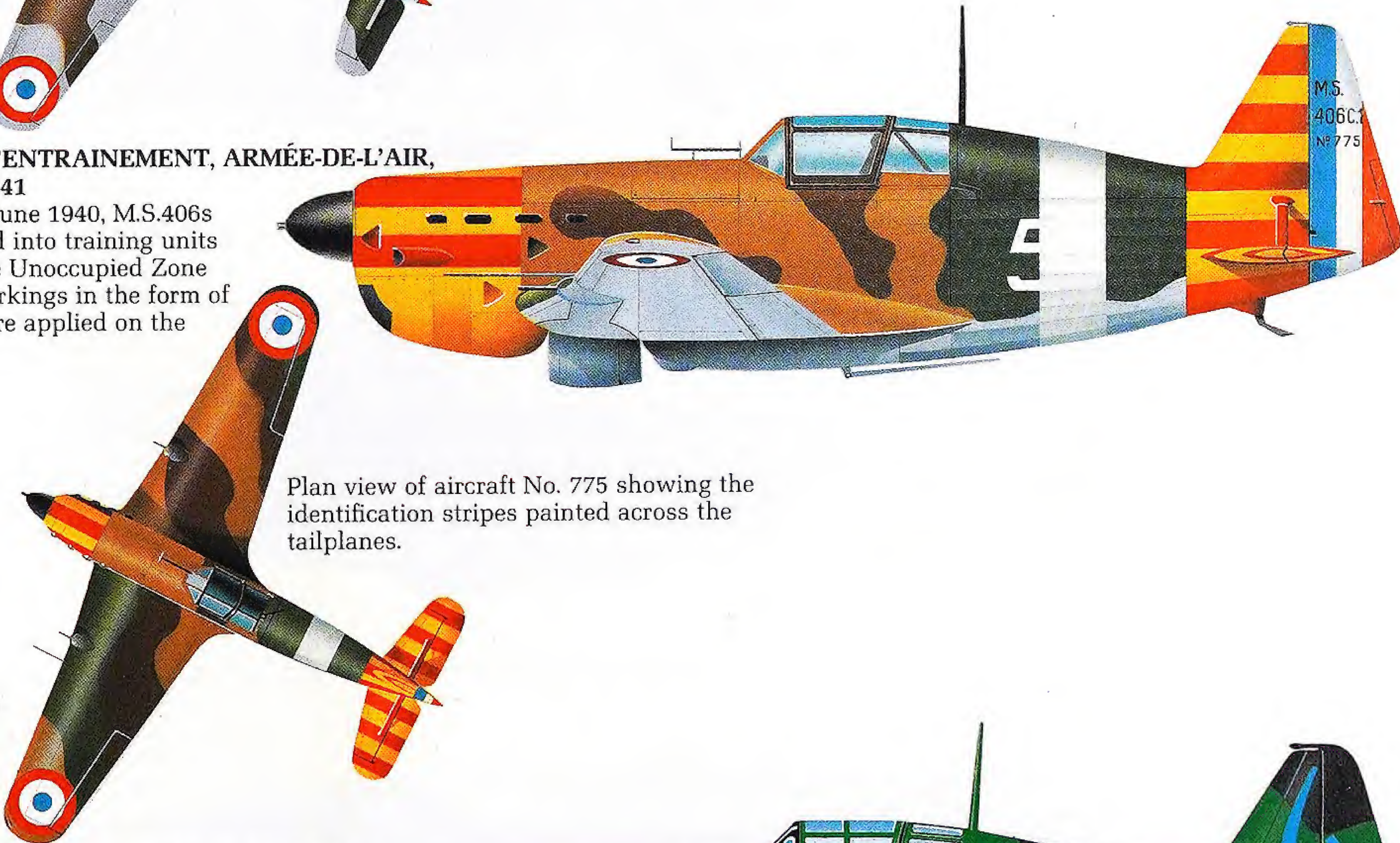


Plan view of aircraft 704 showing the wing roundels positioned at the tips.

Stork marking carried by 704. During World War I, the stork was applied in various flying attitudes on Spads, and this continued into World War II on the M.S.406s.

MS.406C1, ESCADRON D'ENTRAINEMENT, ARMÉE-DE-L'AIR, TOULOUSE, FRANCE, 1941

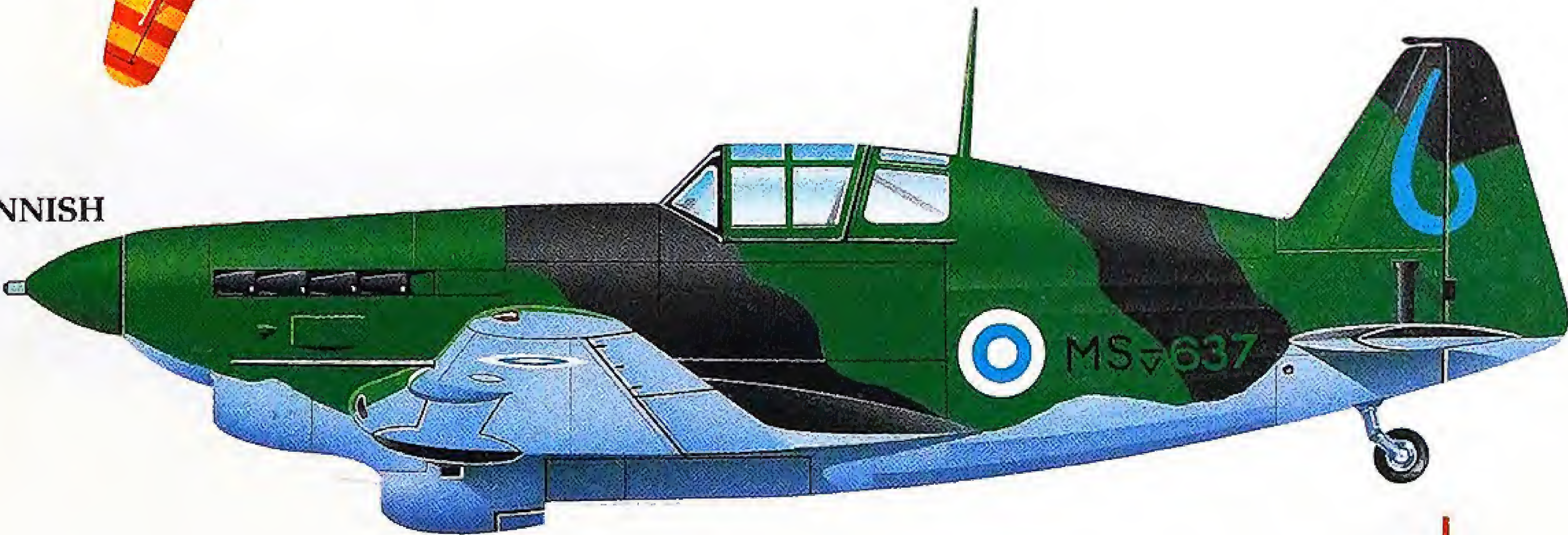
After the armistice on 25 June 1940, M.S.406s were eventually assembled into training units under Vichy control in the Unoccupied Zone of France. Recognition markings in the form of red and yellow stripes were applied on the nose and tail.



Plan view of aircraft No. 775 showing the identification stripes painted across the tailplanes.

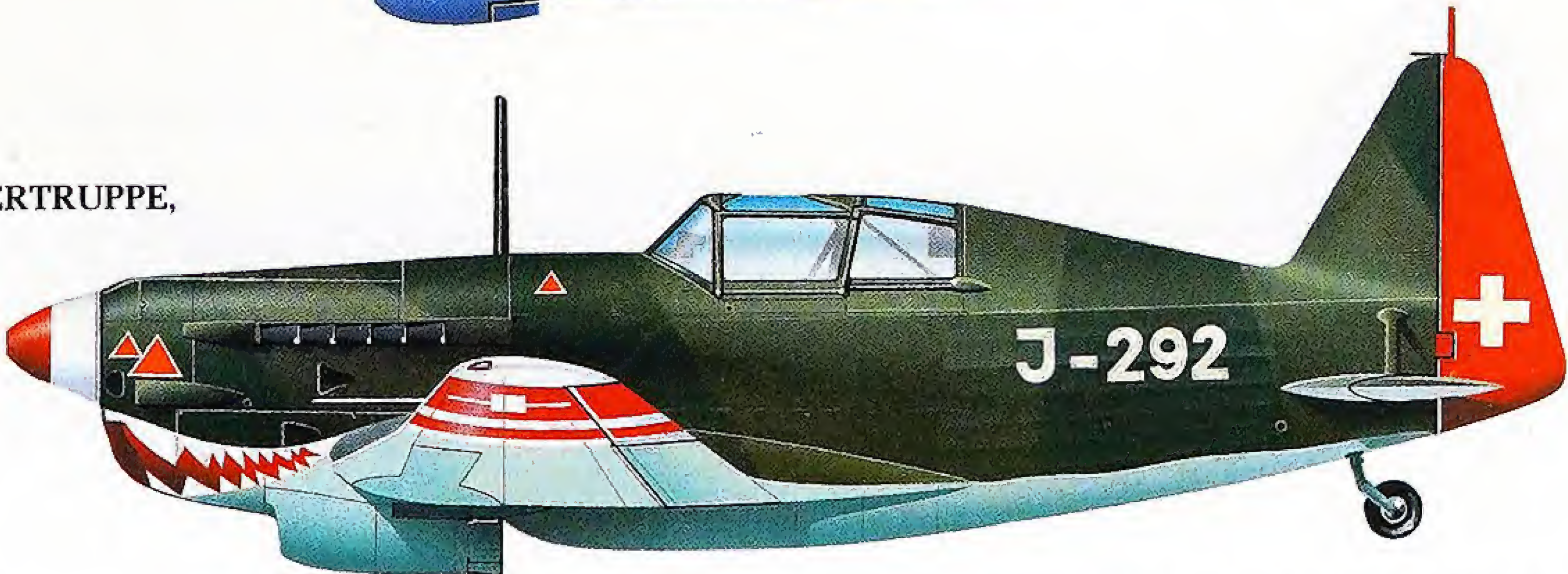
MÖRKÖ (WEREWOLF) MORAANI, HLeLv 28, FINNISH AIR FORCE, LUONETJARVI, FINLAND, 1944

The installation of a more powerful Soviet Klimov M-105P engine gave the Finnish 406s much better performance against the improved generation of Soviet fighters which appeared from 1943. This aircraft has the post-Armistice roundel which replaced the swastika marking after September 1944.



D-3801, FLIEGERKOMPAGNIE 21, SWISS FLIEGERTRUPPE, SWITZERLAND, 1944-5

The Swiss built 207 of these highly-modified M.S.405s, delivery starting in December 1940 and the type remaining in service until May 1959. This World War II period machine carries distinctive red and white wing stripes for border-patrol flights against incursions by Allied and Axis aircraft.

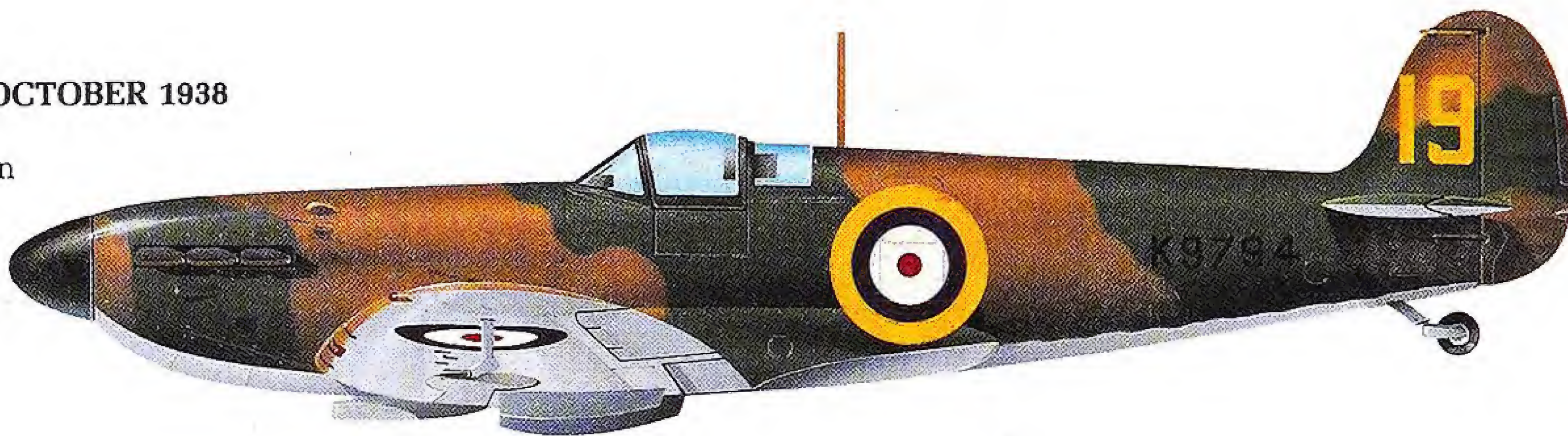


SUPERMARINE SPITFIRE

The best-known British fighter aircraft of all, the Spitfire was designed by R. J. Mitchell and the prototype made its first flight on 5 March 1936. Two years later, the first RAF squadron became operational (No 19 at Duxford). The Spitfire was developed through 24 marks, fought on every war front and finally retired from front-line service on 1 April 1954. A carrier-based version was called Seafire and this was developed through eight marks. Production was 20,351 plus 2556 Seafires.

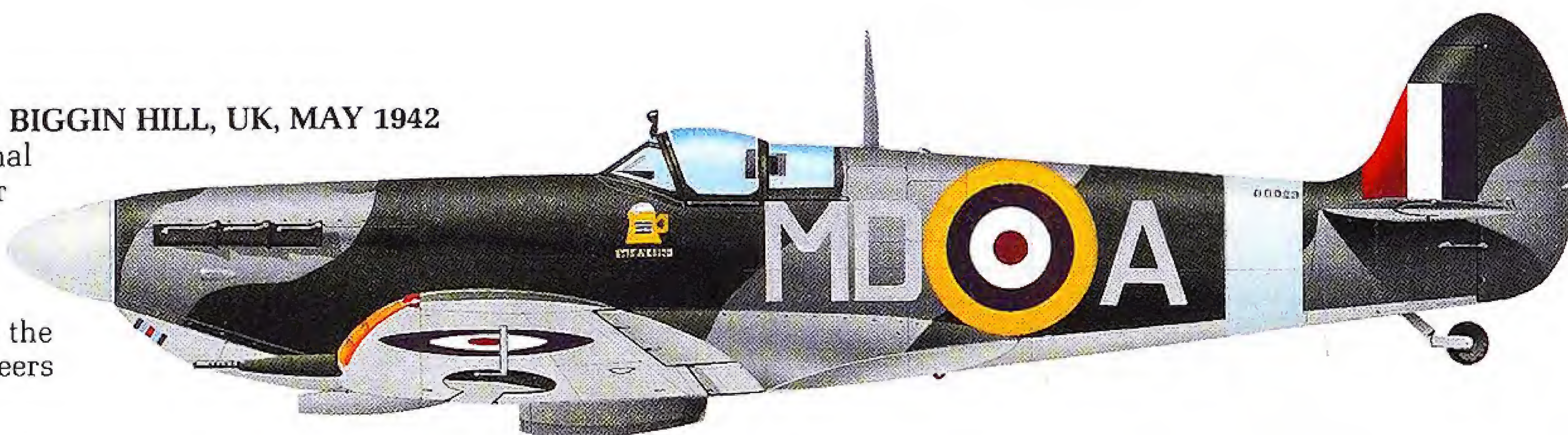
Mk I, 19 SQUADRON, RAF DUXFORD, UK, OCTOBER 1938

One of the first RAF Spitfires delivered, carrying the soon-to-be-deleted unit number on the fin. The camouflage is Dark Green, Dark Earth disruptive pattern. The plane displays 56in upper-surface wing roundels, 35in Type A1 fuselage roundels and 50in underwing roundels.



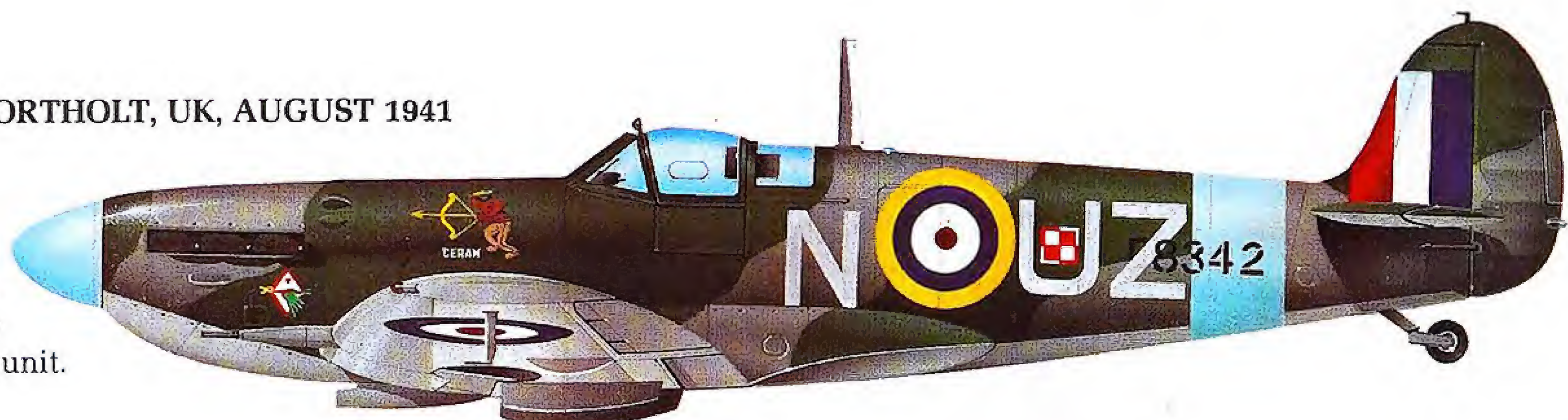
Mk Vb, 133 "EAGLE" SQUADRON, RAF BIGGIN HILL, UK, MAY 1942

This US-manned squadron was operational on fighter sweeps and bomber escort over northern France and the Low Countries. The CO's aircraft has its rank badge under nose and on the mug, which has "Mild & Bitter" underneath. The unit was the third Eagle squadron of American volunteers formed within Fighter Command.



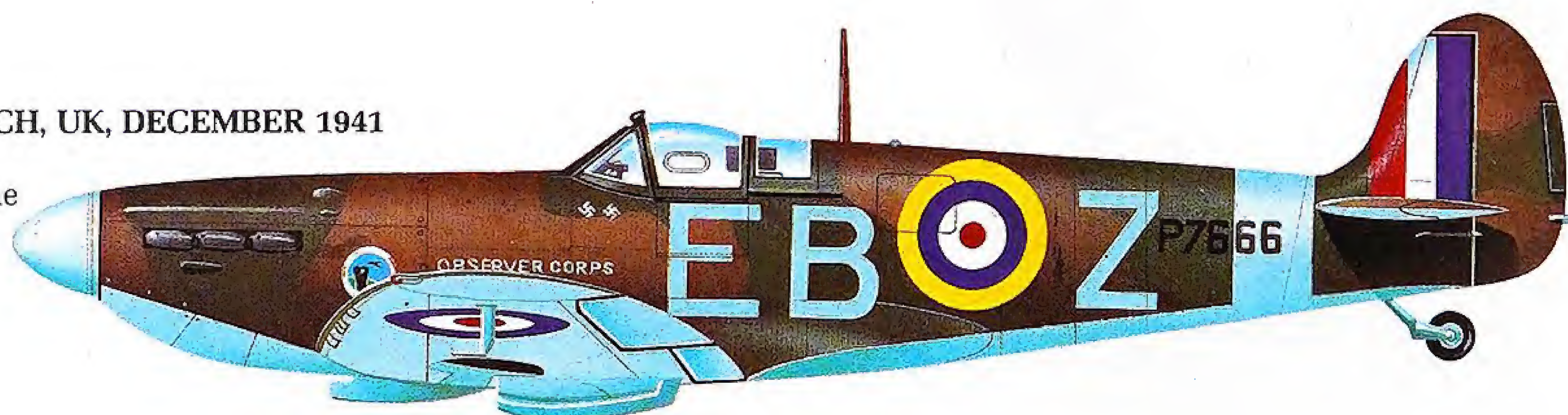
Mk IIb, 306 (POLISH) SQUADRON, RAF NORTHOLT, UK, AUGUST 1941

This was the month Fighter Command changed its colors from Dark Green, Dark Earth to Dark Green, Ocean Gray to reflect offensive operations which were getting underway at that time. Medium Sea Gray is now painted on the undersides. The badge on the nose is of the Polish Torunski unit.



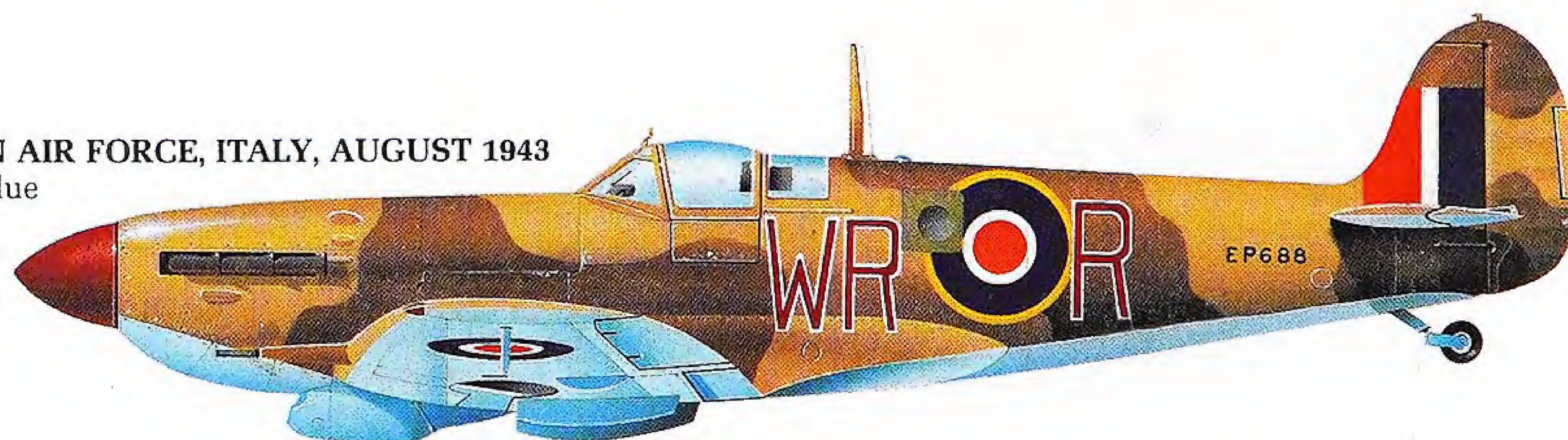
Mk IIa, 41 SQUADRON, RAF HORNCHURCH, UK, DECEMBER 1941

A presentation aircraft from the Observer Corps and flown by Sqn Ldr D. O. Finlay, the unit's commanding officer. The spinner and fuselage band is in Sky, ordered to be applied in November 1940.



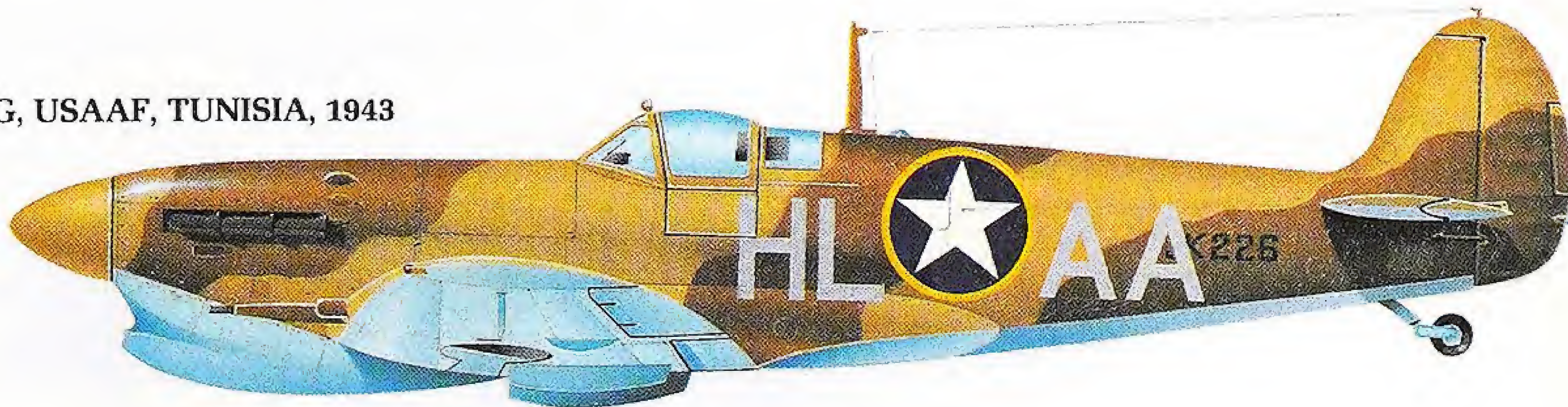
Mk Vb, 40 SQUADRON, SOUTH AFRICAN AIR FORCE, ITALY, AUGUST 1943

Dark Earth and Middle Stone with Azure Blue undersides was a scheme found to be ideal in the Middle East. This machine has an Aboukir tropical filter under the nose and a camera port in the rear fuselage.



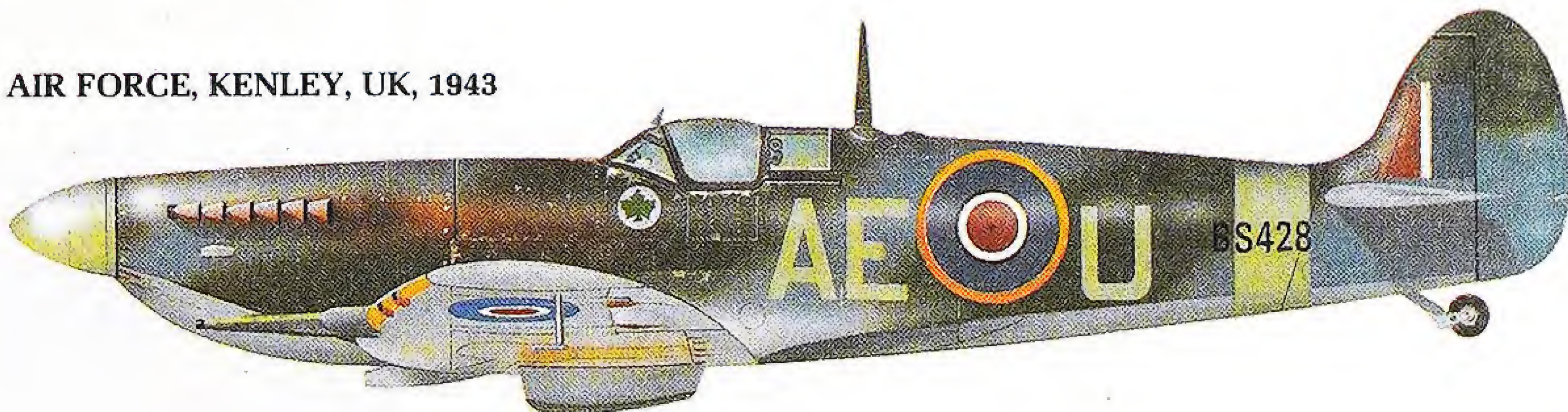
Mk Vc, 308TH FIGHTER SQUADRON, 31st FG, USAAF, TUNISIA, 1943

Another variation of the ME scheme on an aircraft deployed for the Torch landings in North Africa. Note the different type of tropical sand filter under the nose compared with the previous machine.



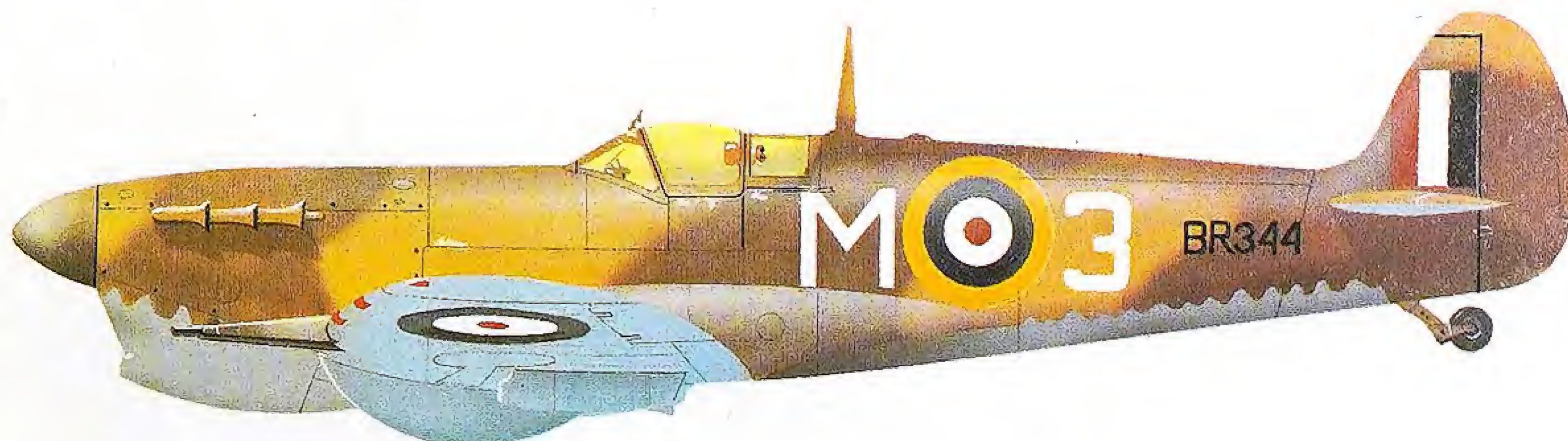
Mk IX, 402 SQUADRON, ROYAL CANADIAN AIR FORCE, KENLEY, UK, 1943

Fighter Command's day fighter scheme for the mid-war years. For quick identification in combat, the Sky spinner and fuselage band were supplemented by yellow leading edges to the wings. Unit badge under cockpit.



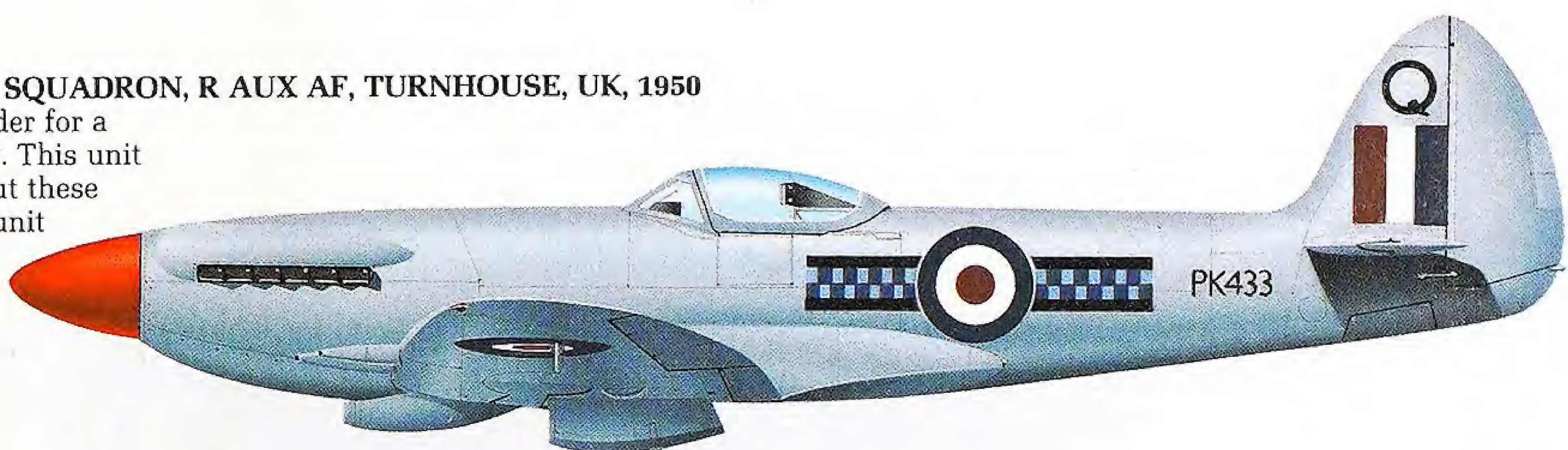
Mk Vc, USS 'WASP', RAF, MALTA, MAY 1942

Equipped with a 90 gal slipper type drop-tank under the fuselage and a tropical filter under the engine, this aircraft was one of 64 Spitfires flown off Wasp and HMS Eagle to reinforce the defenses of Malta against increasing attacks by Axis bombers.



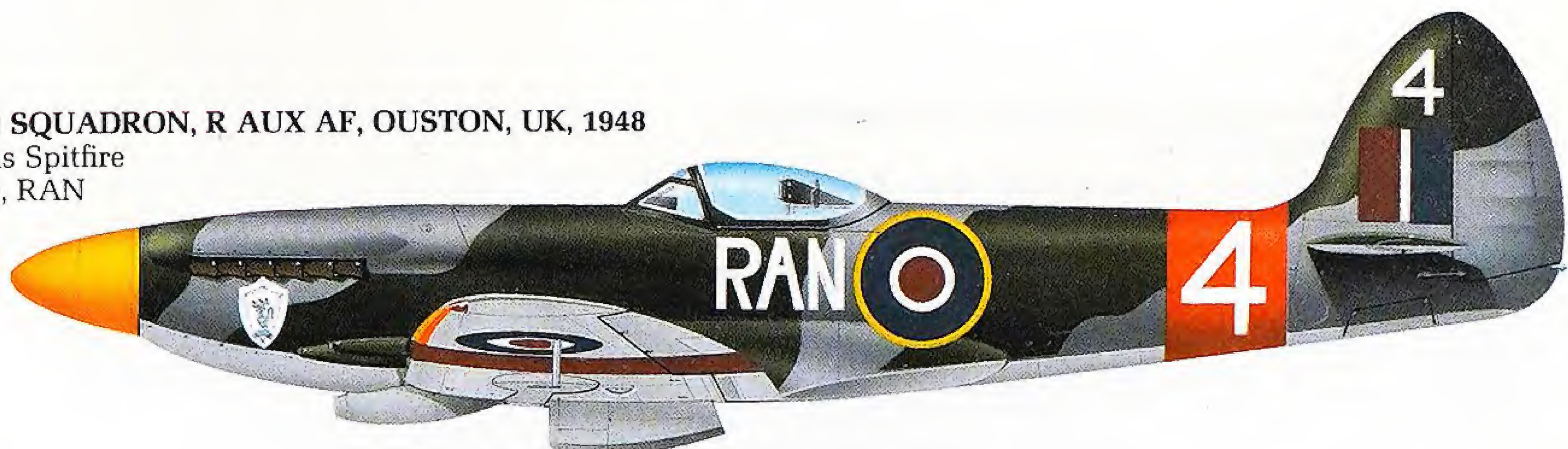
Mk 22, 603 (CITY OF EDINBURGH) SQUADRON, R AUX AF, TURNHOUSE, UK, 1950

Post-war the RAF promulgated an order for a return to the silver finish of pre-1939. This unit was initially allocated RAF codes, but these were later changed to XT when the unit transferred from Reserve status to Fighter Command; "Q" is the individual aircraft letter.



Mk 22, 607 (COUNTY OF DURHAM) SQUADRON, R AUX AF, OUSTON, UK, 1948

Retaining its wartime camouflage, this Spitfire carries the unit badge on the cowl, RAN codes denoting 607 Sqn and race numbers for participation in the Cooper Trophy race of 1948.

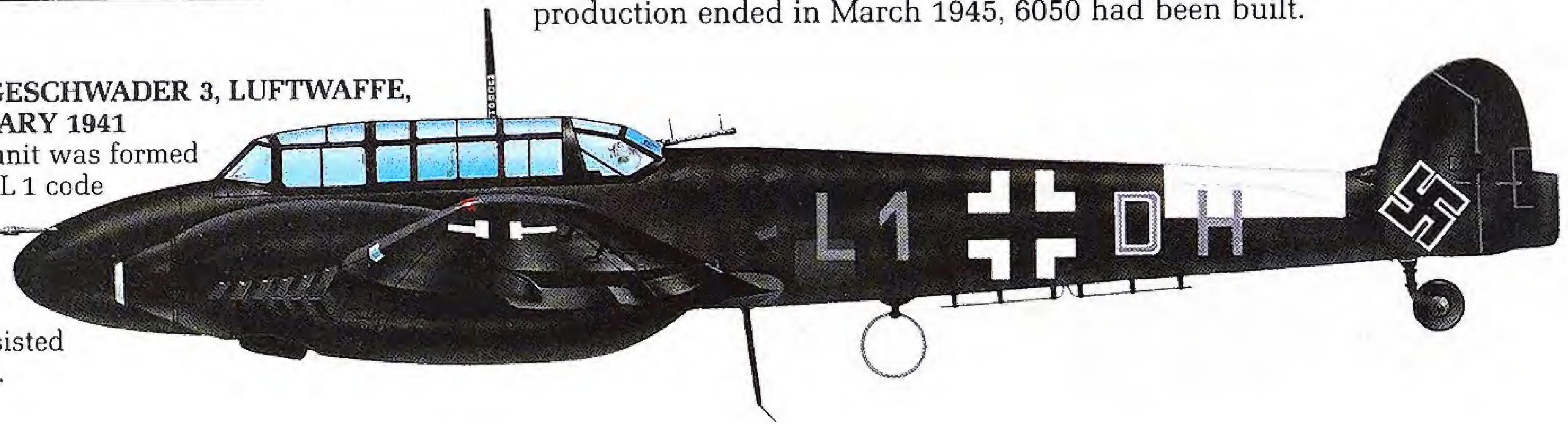


MESSERSCHMITT Bf 110

Seen by the Luftwaffe as the long-range element of its fighter arm, the elegant twin-engined Bf 110 proved unable to hold its own when confronted by modern fast single-seaters. Thus during the Battle of Britain, the Zerstörer (destroyer) units equipped with this type were badly mauled by the RAF's eight-gun fighters and required protection from the Bf 109s. However, it served with distinction in the night-fighter role and in a number of other tasks which better suited its performance. When production ended in March 1945, 6050 had been built.

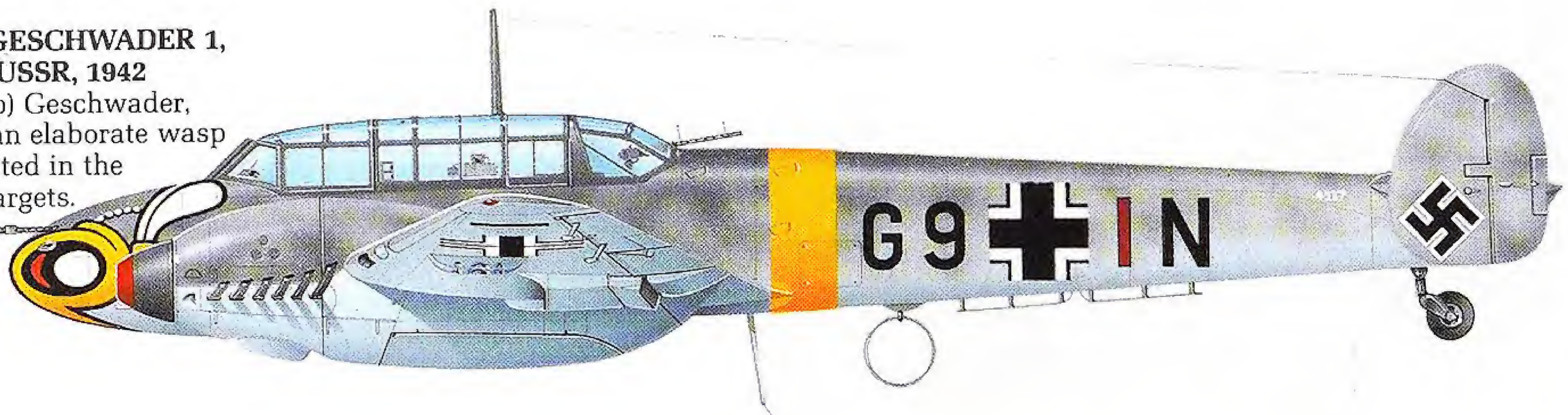
Bf 110D-3, 1/NACHTJAGDGESCHWADER 3, LUFTWAFFE, CATANIA, SICILY, FEBRUARY 1941

This Mediterranean-based unit was formed from LG 1 and retained the L 1 code on its black-painted night fighters. The unit emblem normally applied on the nose and obscured by the engine in this view consisted of an owl sitting on a moon.



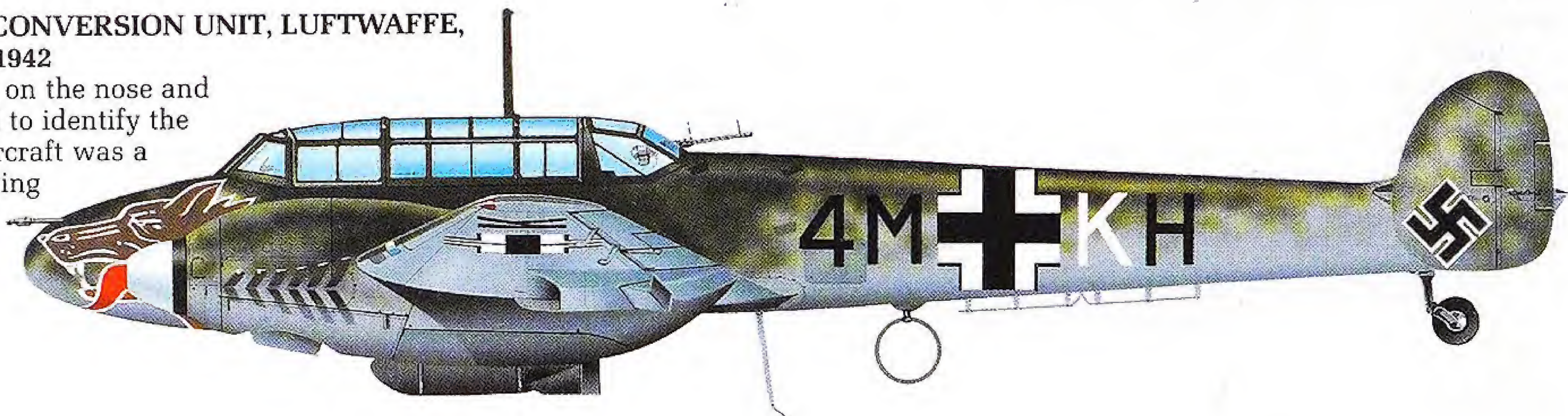
Bf 110C-4/B, 5/ZERSTÖRERGESCHWADER 1, LUFTWAFFE, CAUCASUS, USSR, 1942

Known as the Wespen (Wasp) Geschwader, the aircraft of this unit bore an elaborate wasp design on the nose and operated in the attack role against Russian targets. Other markings include the theater band around the fuselage and the aircraft's construction number just visible forward of the fin.



Bf 110E-1, OPERATIONAL CONVERSION UNIT, LUFTWAFFE, DEBLIN-IRENA, POLAND, 1942

A large wolf's head painted on the nose and the unit code 4M have failed to identify the number of this OCU. The aircraft was a fighter-bomber version carrying standard Hellblau under-surface coloring with probably Schwarzgrün, Dunkelgrün over the top surfaces.



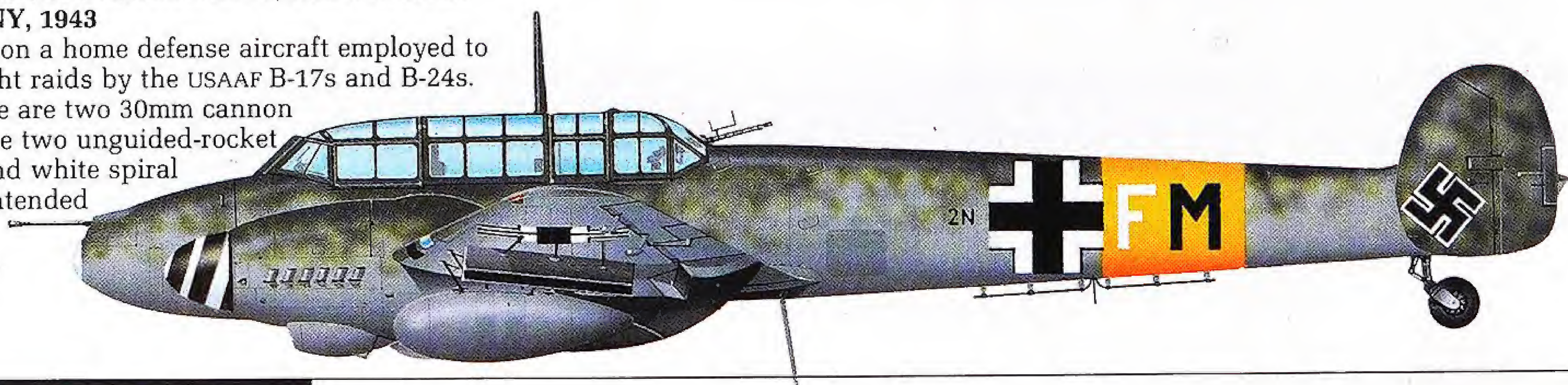
Bf 110 E-1/R4, 8/ZERSTÖRERGESCHWADER 26, LUFTWAFFE, BERCA, NORTH AFRICA, 1942

Desert camouflage comprising Sandgelb (79) with a random spray of dark green over all upper and side surfaces. This was not an official scheme but one devised by the unit which best suited its type of low-level attack. The large cannon under the fuselage is a 37mm Flak gun for anti-tank use.



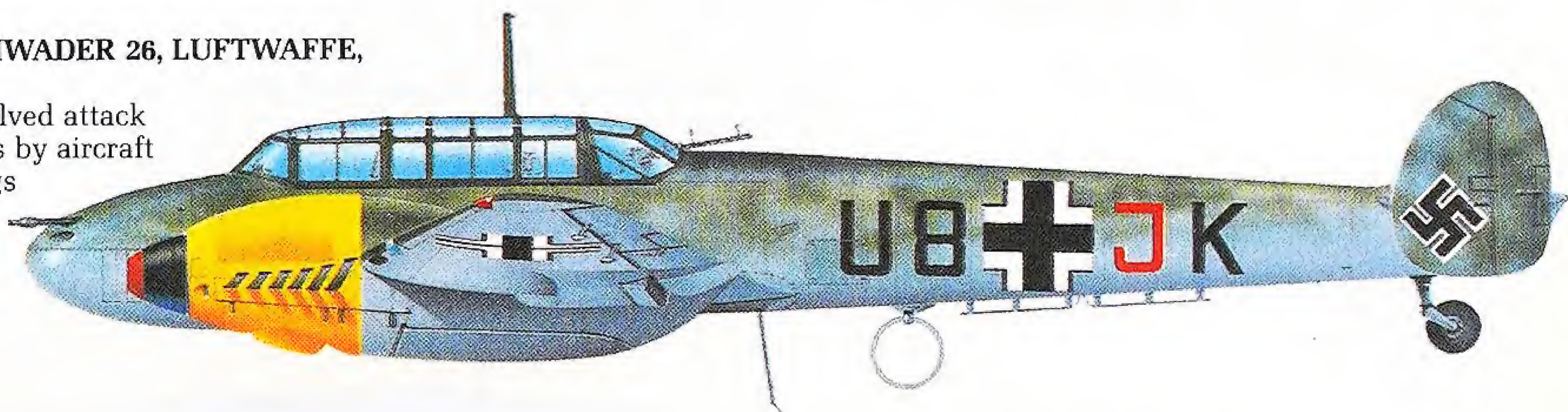
Bf 110G-2, 5/ZERSTÖRERGESCHWADER 76, LUFTWAFFE, WERTHEIM, GERMANY, 1943

Day fighter camouflage on a home defense aircraft employed to attack the heavy daylight raids by the USAAF B-17s and B-24s. Projecting from the nose are two 30mm cannon and under the wings are two unguided-rocket launchers. The black and white spiral spinner marking was intended to distract enemy gunners from their aim, but its effectiveness is unrecorded.



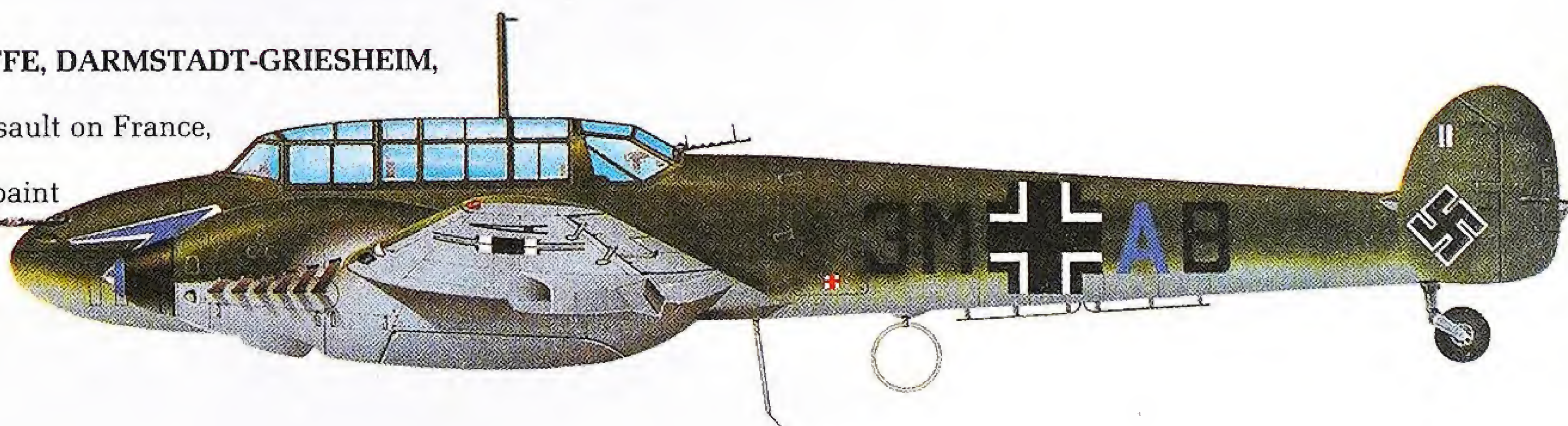
Bf 110C-4, 2./ZERSTORERGESCHWADER 26, LUFTWAFFE, ARGOS, GREECE, MAY 1941

The German assault on Crete involved attack operations against Allied positions by aircraft of this unit. Yellow engine cowlings were a visual identification marking.



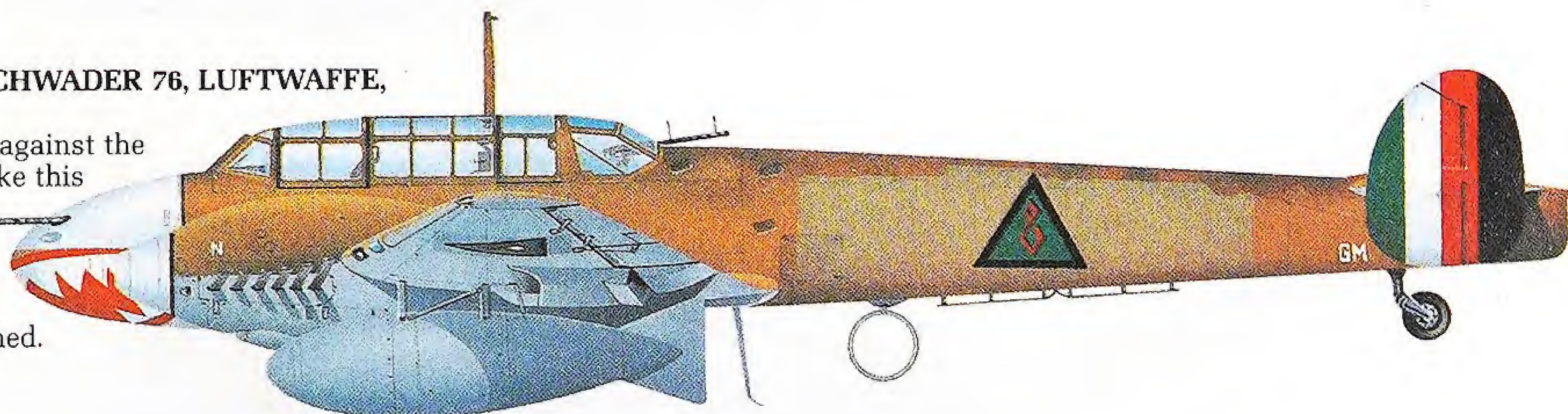
Bf 110C-2, STAB I/ZG 2, LUFTWAFFE, DARMSTADT-GRIESHEIM, GERMANY, APRIL 1940

Shown just before the May 1940 assault on France, this 'Zerstorer' has the early style fuselage cross over the dark green paint scheme. Two 'kill' markings appear on the fin and on the nose is the unit's blue lightning flash outlined in white.



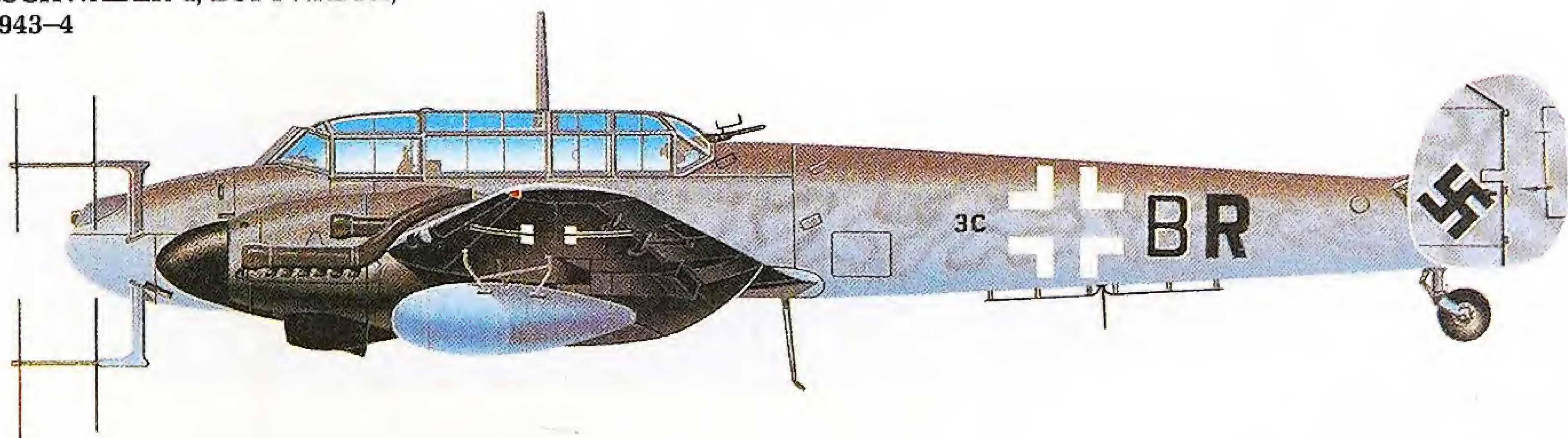
Bf 110D-3, 4./ZERSTORERGESCHWADER 76, LUFTWAFFE, IRAQ, MAY 1941

In support of the Iraqi uprising against the British, Germany sent aircraft like this example from ZG 76. The Iraqi national marking was applied over the fuselage code M8 + GM although the unit's shark-mouth insignia was retained.



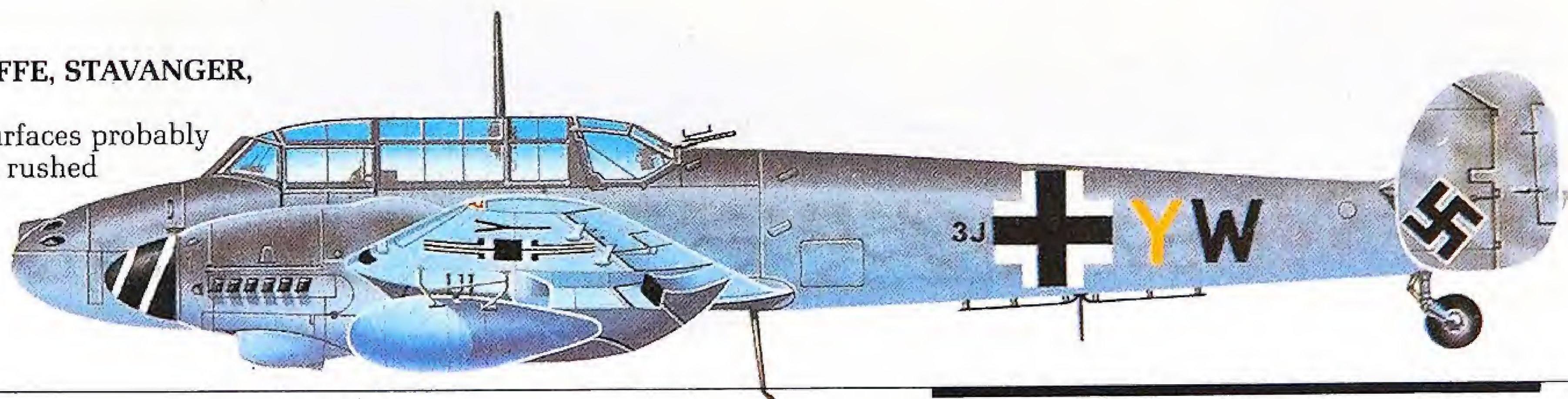
Bf 110G-4, 7./NACHTJAGDGESCHWADER 4, LUFTWAFFE, NORTH-WEST GERMANY, 1943-4

Night-fighter camouflage on an SN-2 radar-equipped aircraft. Note the flame-damping pipes on the engine exhausts.



Bf 110G-2, 12./NJG 3, LUFTWAFFE, STAVANGER, NORWAY, EARLY 1945

No radar or matt black undersurfaces probably indicates a replacement aircraft rushed into service for free-ranging night fighting use.

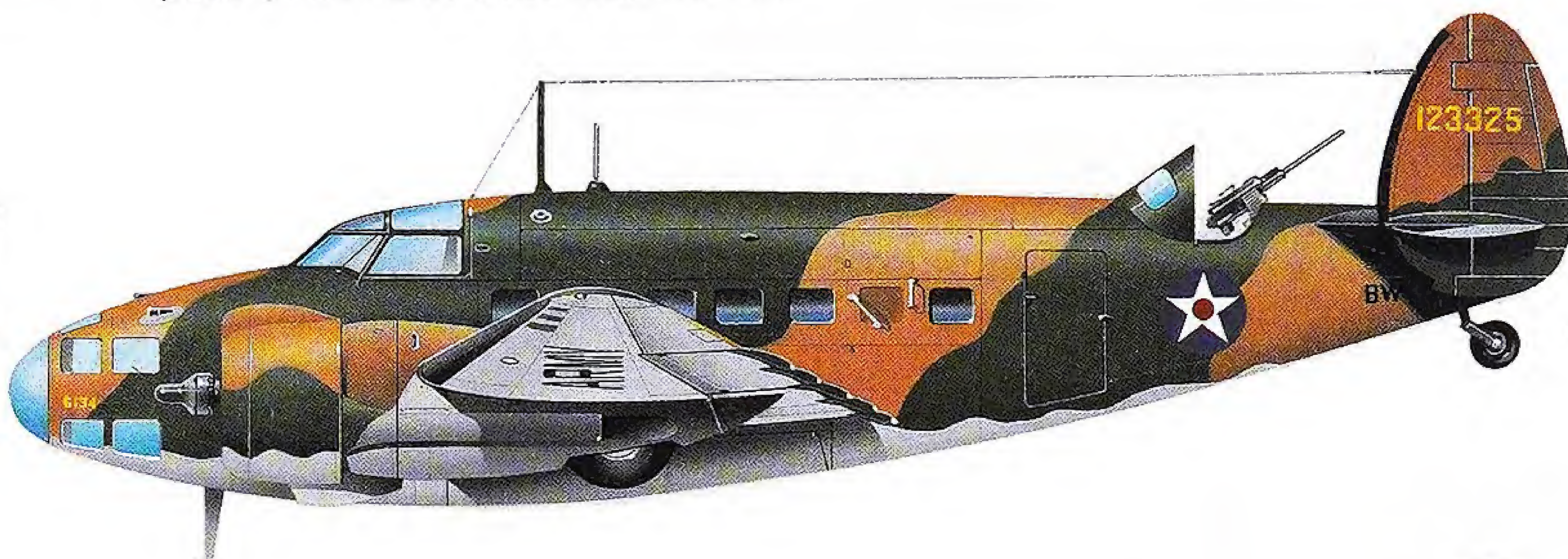


LOCKHEED HUDSON

Designed to an RAF Coastal Command requirement for a medium-range reconnaissance-bomber, Lockheed produced the Hudson from its Super-Electra airliner, adding a bomb-bay, gun turret, forward-firing guns in the nose and other military equipment. First flight was 10 December 1938 and the type entered RAF service with 224 Sqn at Gosport in mid 1939. Eight marks of Hudson were produced and 2584 were built. Hudsons also served with the RAAF, RNZAF and the US Navy (PBO-1) and USAAF (A-28, A-29, AT-18).

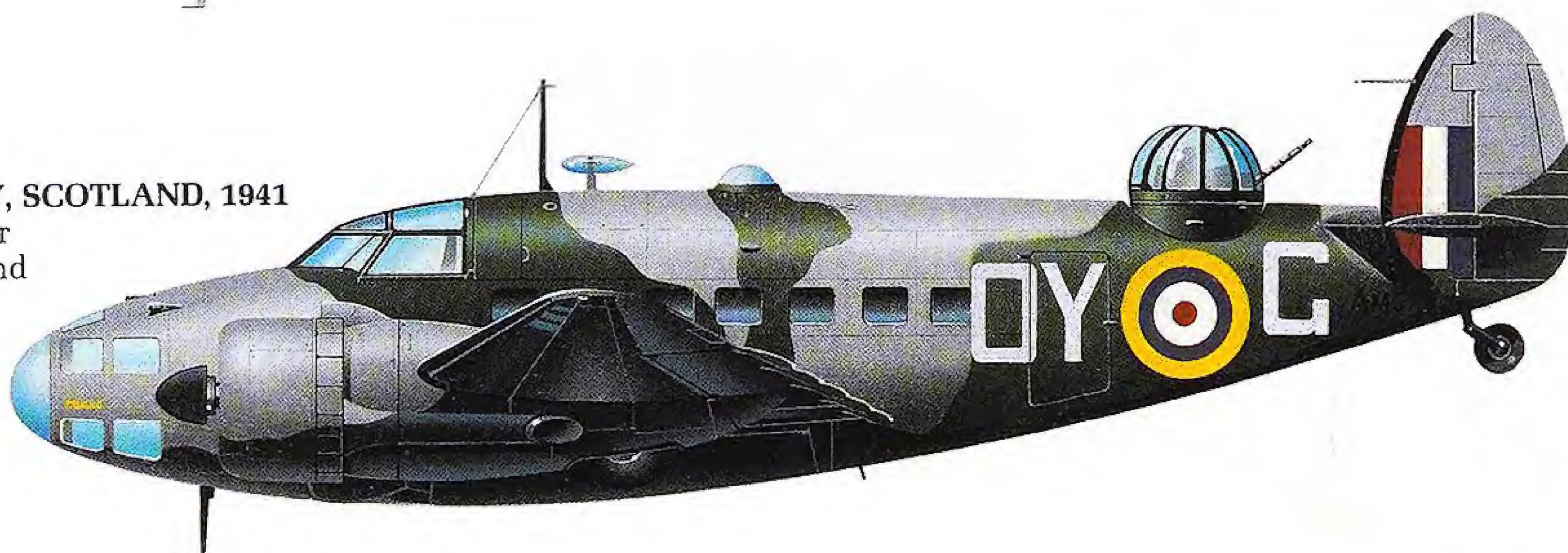
A-29, US ARMY AIR CORPS, EARLY 1942

Built for the RAF as a Hudson Mk IIIA but repossessed by USAAC for ASW patrols. British Dark Green, Dark Earth camouflage was retained. The Red in the star was removed from May 1942 after the US entered World War II. The RAF black serial was retained under the tail.



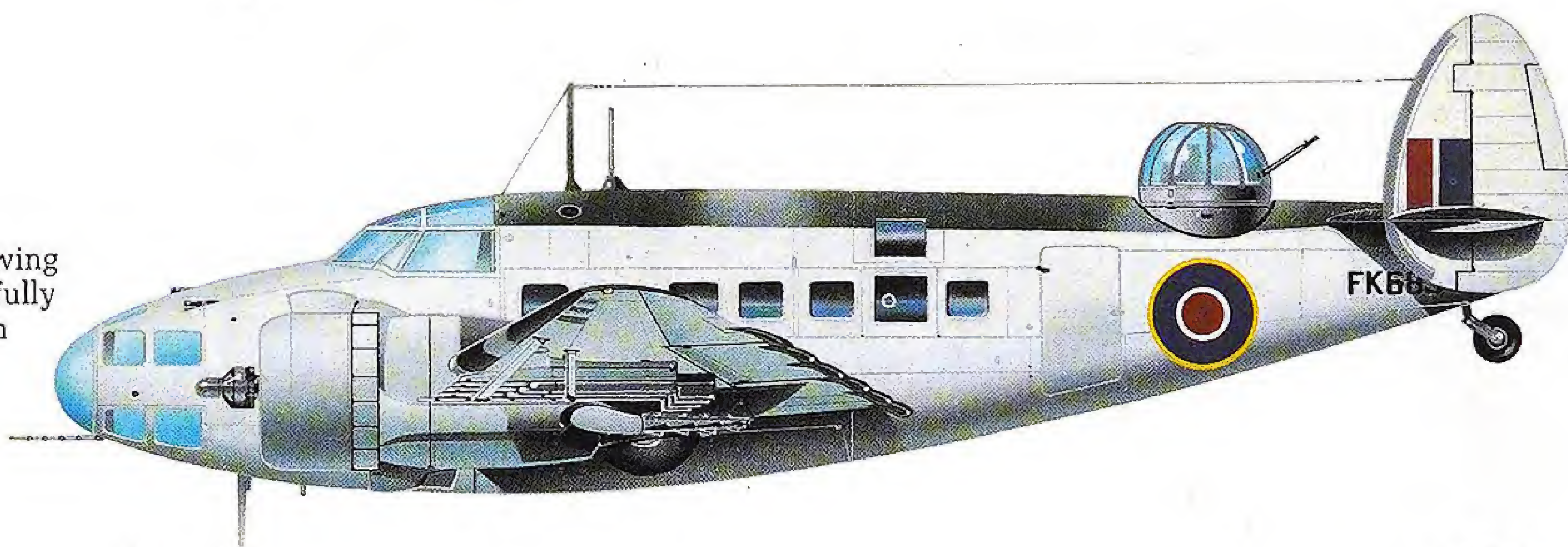
Mk V, 48 SQUADRON, RAF STORNOWAY, SCOTLAND, 1941

This Temperate Sea Scheme was ordered for all Hudsons and other RAF Coastal Command landplanes. Night (matt Black) undersides were carried for nocturnal bombing missions. Note the earlier roundels and rudder stripes compared with these on OS-T below.



Mk VI, RAF, 1943

An uncoded Hudson armed with underwing rockets. This weapon was used successfully by aircraft of 608 Sqn against U-boats in the Mediterranean.



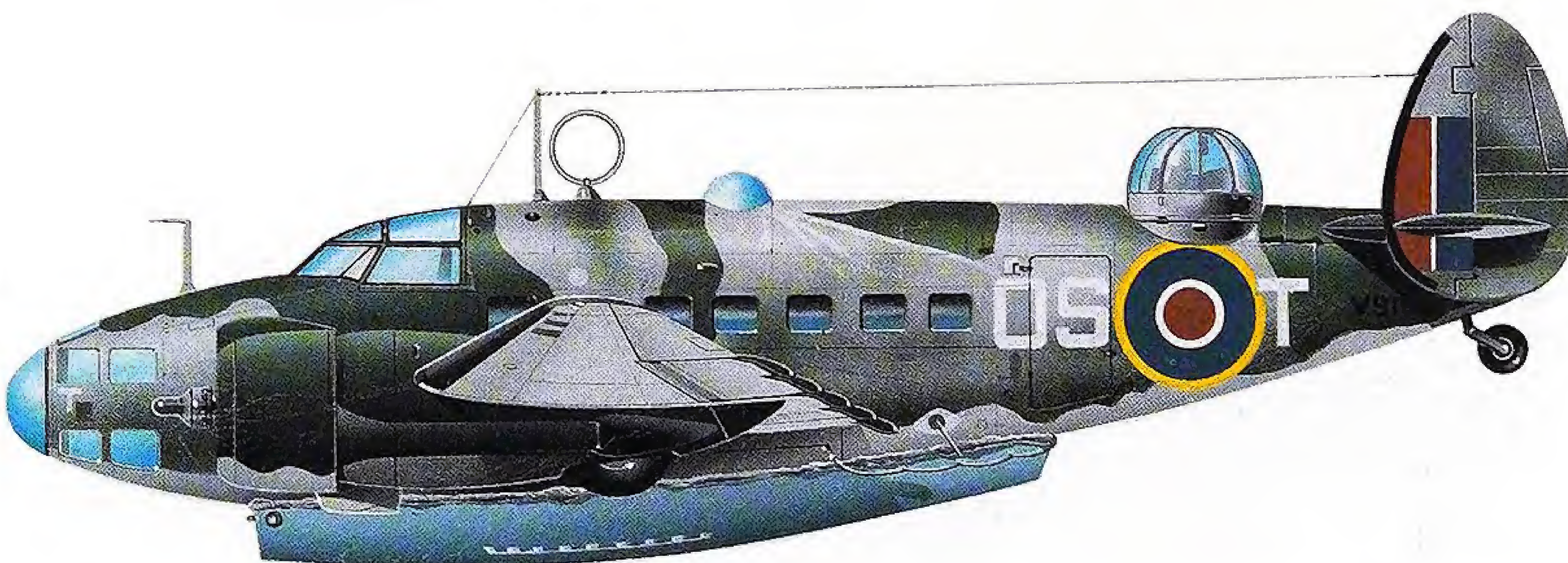
LODESTAR, BOAC, LEUCHARS, SCOTLAND, 1942

This civilian aircraft named *Loch Losna* was camouflaged Dark Green, Dark Earth and Night (Black) for courier service between the UK and Sweden. Registration G-A was painted above port wing and GDD above the starboard. Like the registration on the fuselage, both were underlined.



Mk III, 279 SQUADRON, RAF BIRCHAM NEWTON, UK, 1942

These aircraft were used for air-sea rescue duties and were fitted with an airborne lifeboat which could be dropped by parachute.



DOUGLAS A-20 BOSTON

The prototype of the DB-7 twin-engined attack bomber flew on 17 August 1939, with France as the type's first overseas customer. Neat in appearance with a then unusual tricycle undercarriage, the DB-7 had a respectable top speed of 314mph. Only a few were delivered to France before the collapse in 1940, the rest being assigned to the RAF as the Boston. For the night-intruder and fighter role, the aircraft was called Havoc, a name also adopted by the USAAF for its A-20 series. Production totaled 7385.

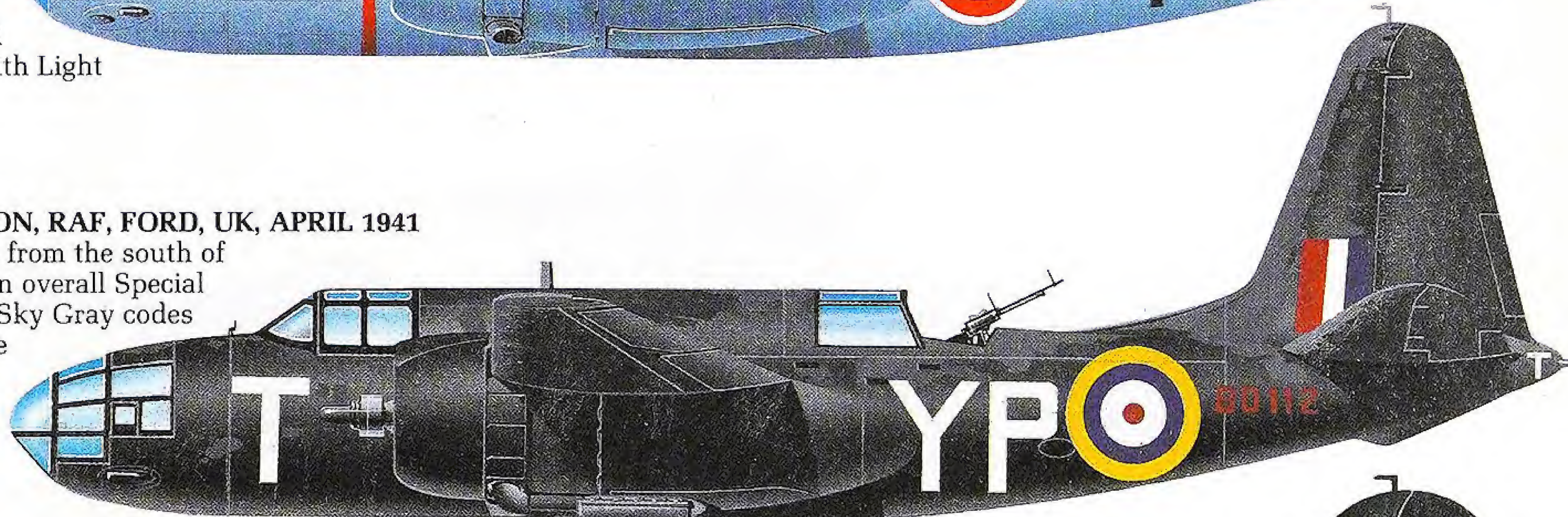
DB-7B, GROUPE DE BOMBARDEMENT 1/19, ARMÉE-DE-L'AIR DE L'ARMISTICE, BLIDA, ALGERIA, AUTUMN 1940

The 24th production aircraft, this DB-7 carries the early special marking applied at this time to all Vichy-operated aircraft: a white horizontal stripe along the fuselage and a white outer circle to the fuselage roundel. Camouflage was Dark Green, Light Earth and Blue-Gray upper surfaces with Light Blue-Gray undersides.



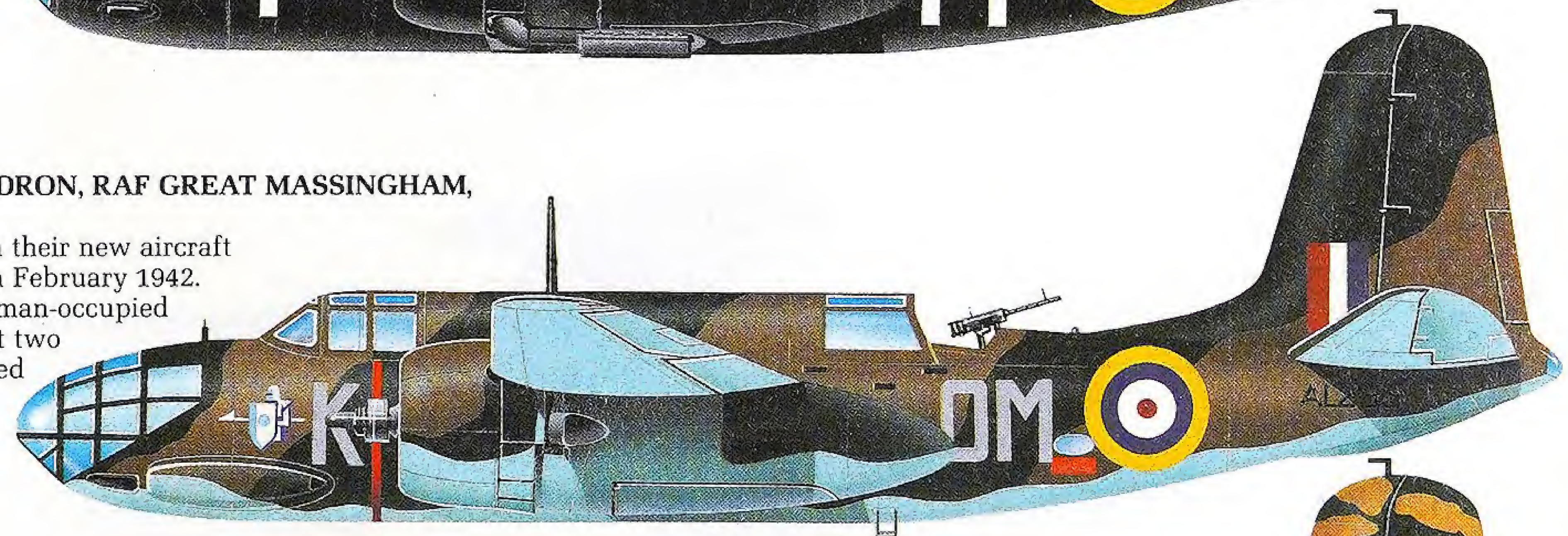
HAVOC Mk 1, 23 SQUADRON, RAF, FORD, UK, APRIL 1941

Operated on intruder sorties from the south of England, BD112 is finished in overall Special Night RDM 2A (black) with Sky Gray codes and Dull Red serial. Fuselage roundel is a Type A1, while above the wings they were Type B.



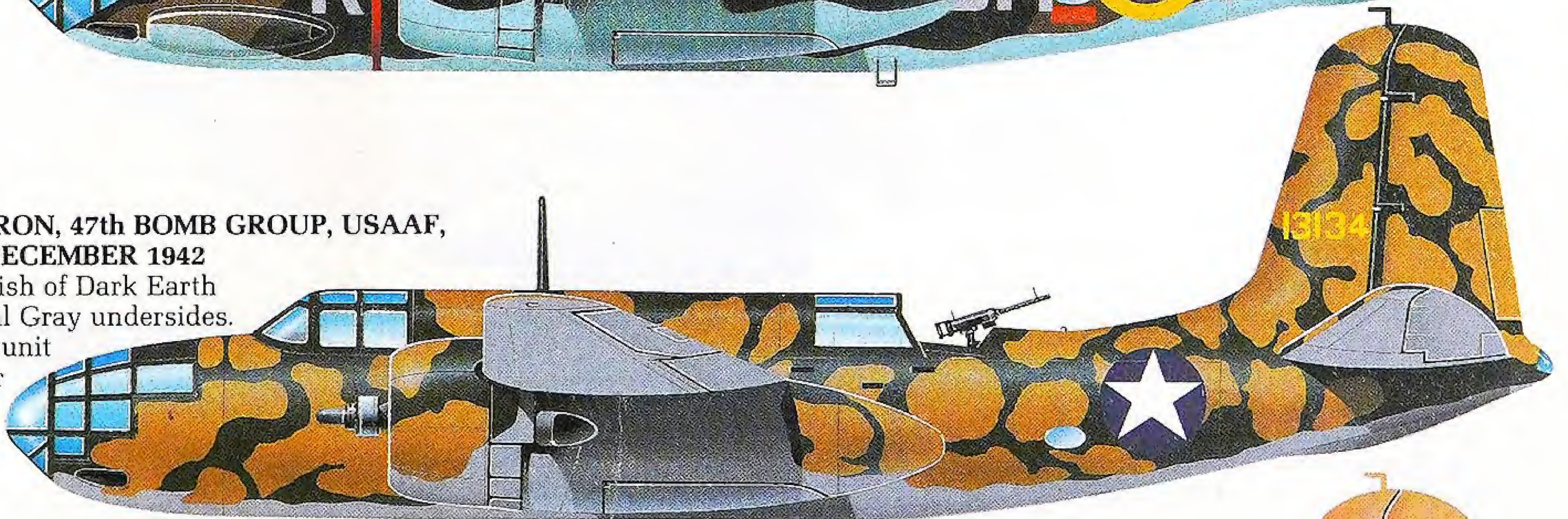
BOSTON Mk III, 107 SQUADRON, RAF GREAT MASSINGHAM, UK, MARCH 1942

No. 2 Group squadrons with their new aircraft began operations officially in February 1942. They bombed targets in German-occupied northern Europe for the next two years, usually heavily escorted by RAF fighters. This example is in Dark Green, Dark Earth with Sky undersides.



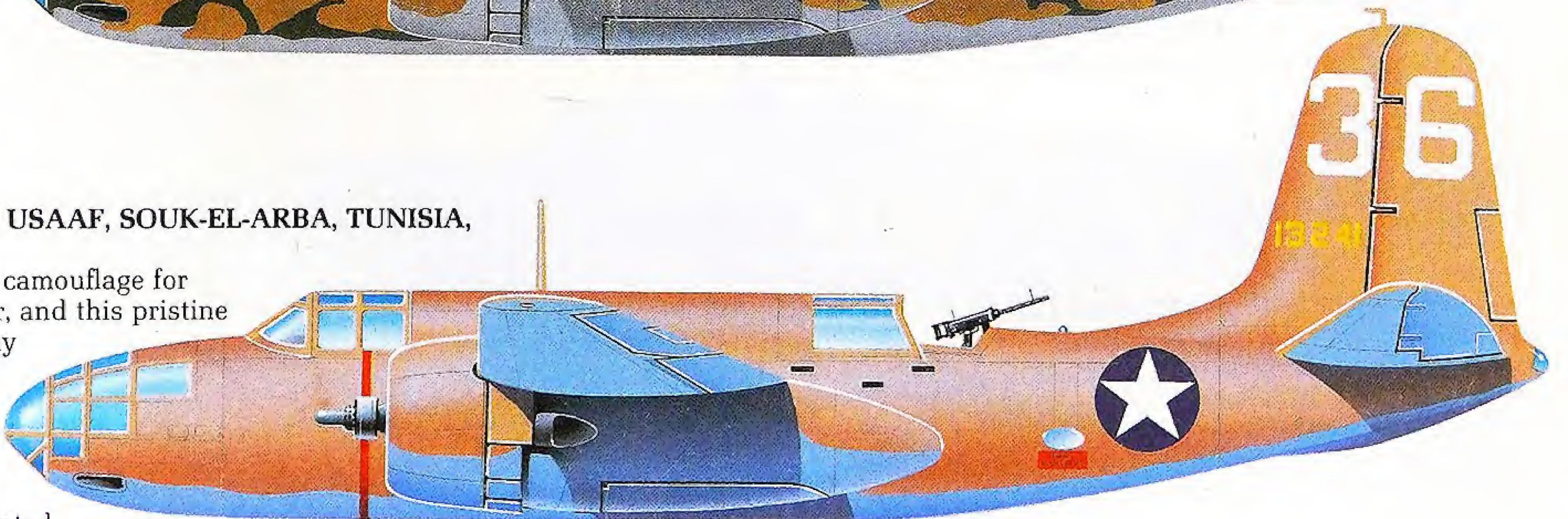
A-20B, 84th BOMB SQUADRON, 47th BOMB GROUP, USAAF, MADIOUNA, MOROCCO, DECEMBER 1942

An unofficial camouflage finish of Dark Earth over Olive Drab with Neutral Gray undersides. The 47th was the only A-20 unit in the Mediterranean theater and remained there until 1945. The rear gun is a .50 caliber MG.



A-20B, 47th BOMB GROUP, USAAF, SOUK-EL-ARBA, TUNISIA, MAY 1943

Desert Sand was the official camouflage for USAAF aircraft in this theater, and this pristine example contrasts with many machines at the time which had various combinations of Olive Drab, Dark Green and Brown schemes. The large tail numbers were sometimes crudely hand-painted.

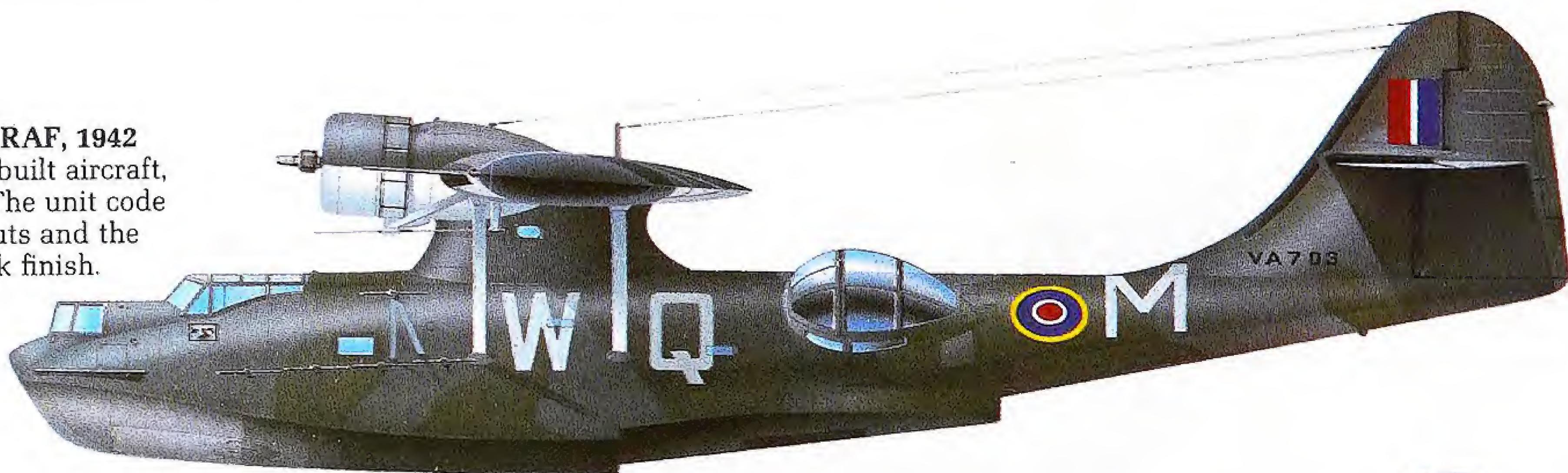


PBY CATALINA

Patrol-bomber squadrons of the US Navy introduced the twin-engined PBY-1 (later named Catalina by the RAF) into service in 1936. Long endurance was the main requirement which led to the design of this fine flying-boat and it served reliably throughout WWII in almost every theater. The main production versions were the PBY-5, -5A and -6, some being amphibious, and when production finally ended 2550 had been built in the USA, a further 731 in Canada (as the Canso) and an unknown quantity in the USSR as the GST.

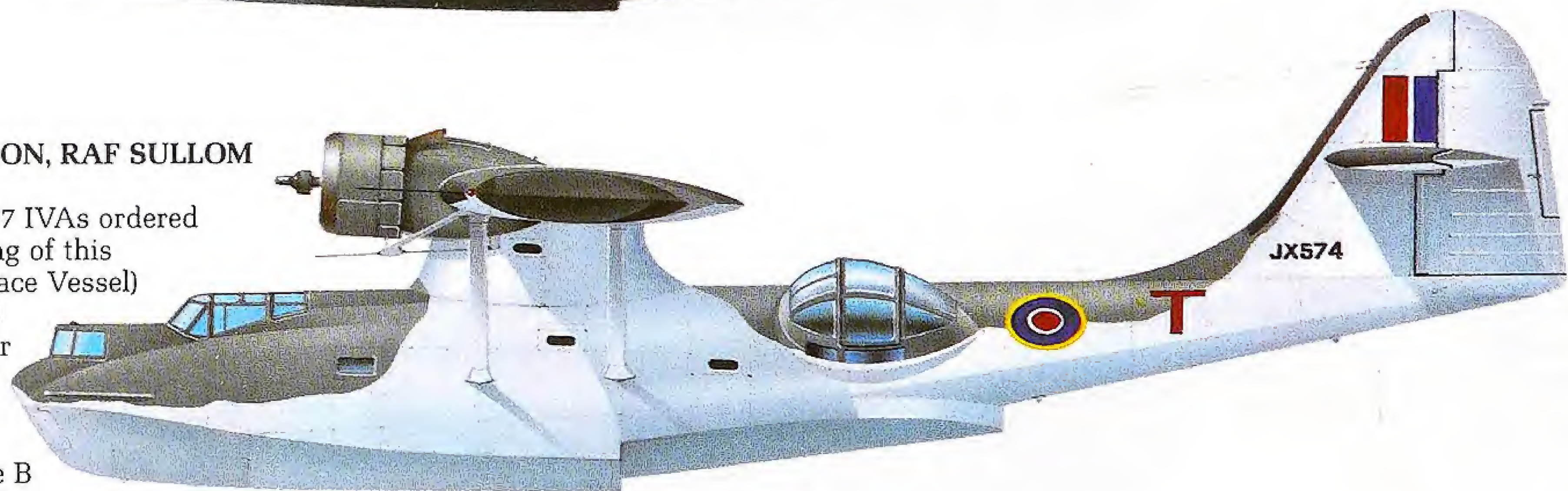
GR Mk IIA, 209 SQUADRON, RAF, 1942

This was a Canadian Vickers-built aircraft, delivered to 209 Sqn in 1942. The unit code has been split by the wing struts and the markings applied over the dark finish.



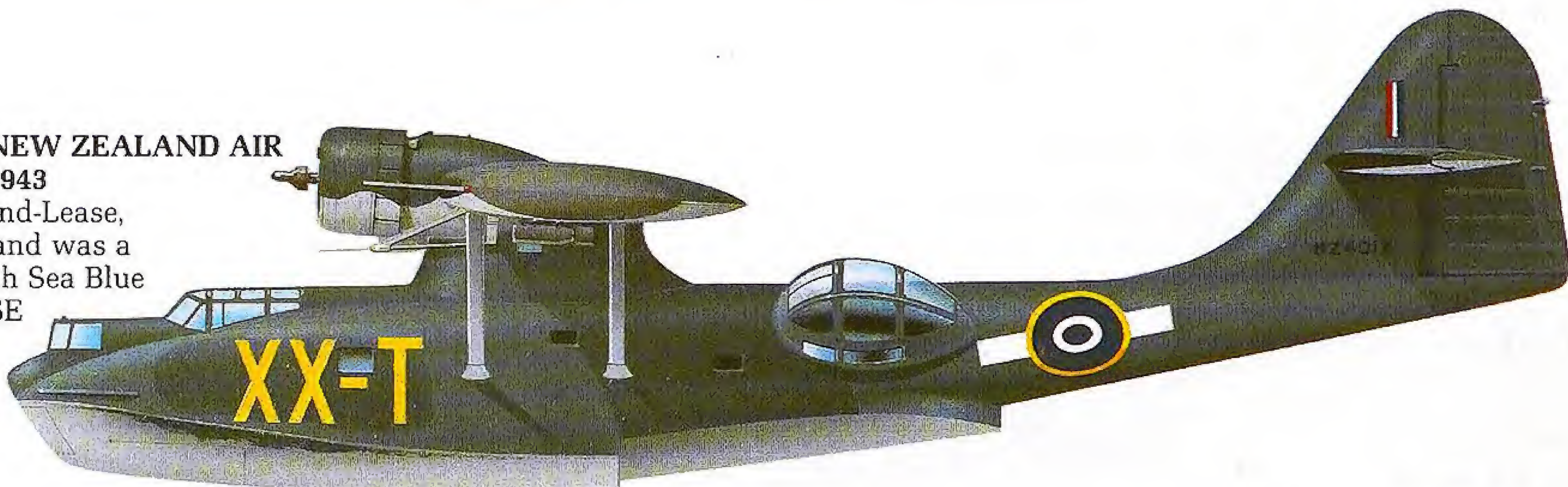
Mk IVA (JX574), 210 SQUADRON, RAF SULLOM VOE, SHETLAND, UK, 1944

Late-war markings on one of 97 IVAs ordered by the RAF. Under the port wing of this aircraft is an ASV (Air-to-Surface Vessel) aerial and under the starboard side was a Leigh Light used for illuminating surface targets at night. Standard Coastal Command gray and white camouflage with red-blue Type B roundels above the wings.



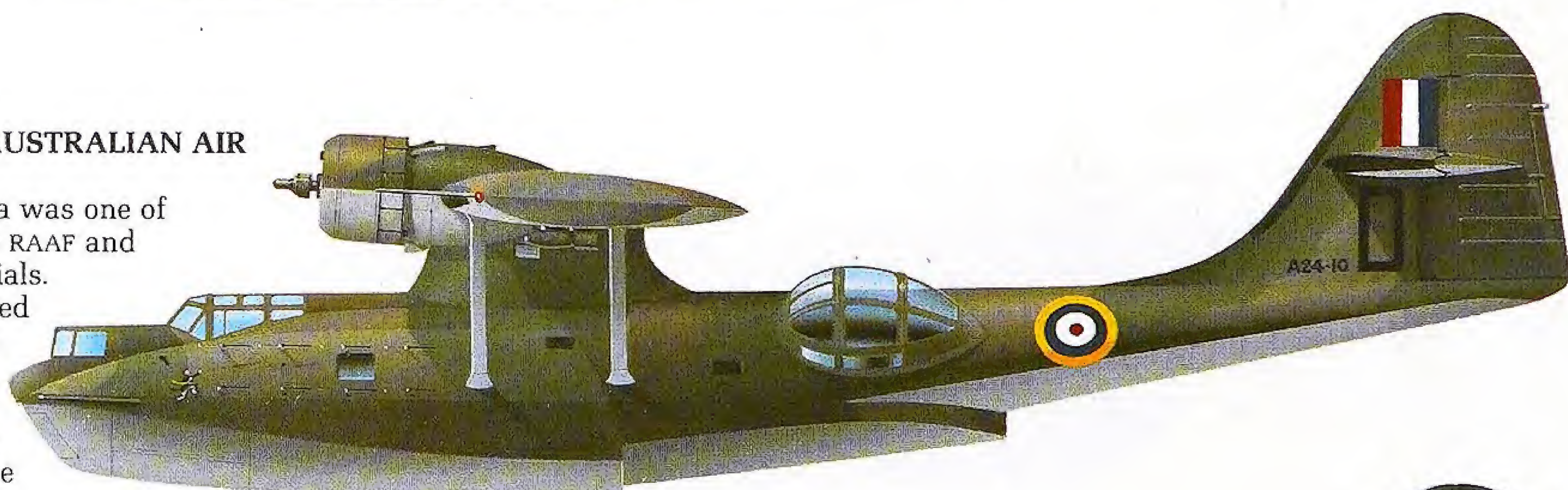
PB2B-1, 6 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, LAUTHALA BAY, FIJI, 1943

Supplied to the RNZAF through Lend-Lease, NZ4017 was one of 34 in service and was a Boeing Canada-built example, with Sea Blue and Light Gray undersides with SE Asia markings. As well as the ASV aerial, the port wing carries a small depth bomb for anti-submarine use.



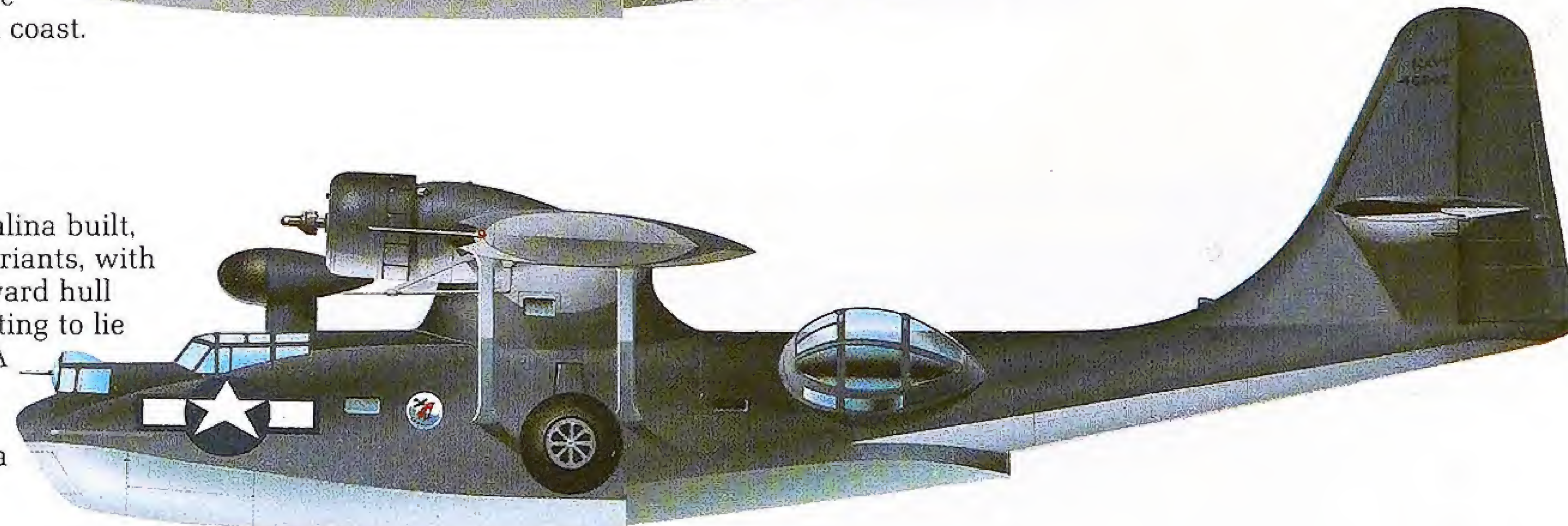
PBY-5, 11 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, AUSTRALIA, 1942

Serialized A24-10, this early Catalina was one of 168 of all marks purchased for the RAAF and carries fuselage-mounted ASV aeriels. Individual aircraft letter D is applied in black under the tailplane. Later marks, known as Black Cats owing to their overall matt-black finish, operated in the mine-laying role, sinking many tons of Japanese shipping as far north as the China coast.



PBY-6A, US NAVY, 1945-6

The last of the main marks of Catalina built, this was one of the amphibious variants, with a nosewheel tucked up in the forward hull and the main undercarriage retracting to lie flush in the fuselage sides. The -6A incorporated a taller fin and rudder and this patrol squadron example also has ASV as well as a nose machine gun.

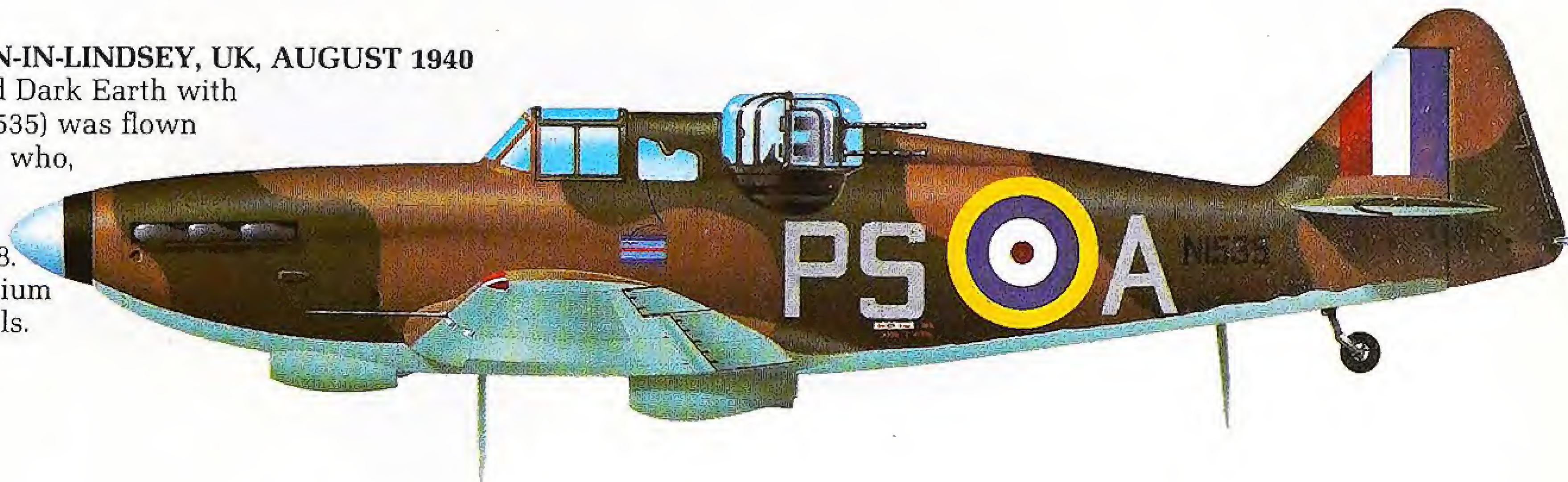


BOULTON PAUL DEFIANT

The Defiant two-seat turreted fighter was conceived in 1935 and the prototype first flew on 11 August 1937. In May 1940 the RAF achieved some early successes with the type, but the Defiant's lack of forward armament proved to be a major weakness in daylight combat. High losses prompted its switch to the night fighting role, where it realized its true potential. The Defiant Mk I and II differed mainly in engine power, while the Mk III was used as a target tug. Production totaled 1060.

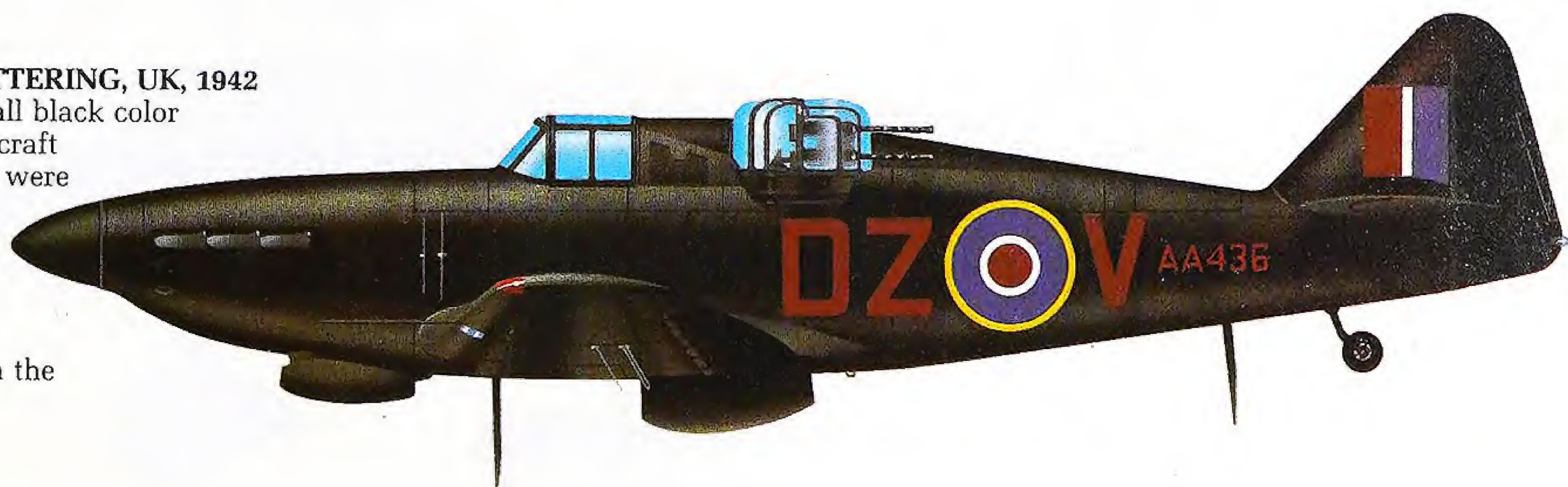
Mk I, 264 SQUADRON, RAF, KIRTON-IN-LINDSEY, UK, AUGUST 1940

Day fighter scheme of Dark Green and Dark Earth with Sky undersurfaces. This machine (N1535) was flown by the unit CO Sqn Ldr Philip Hunter who, with his gunner, Plt Off F.H. King, were killed on the 24th of August in an engagement with a Junkers Ju 88. Fuselage markings are 30in high, Medium Sea Gray Codes with 42in dia. roundels.



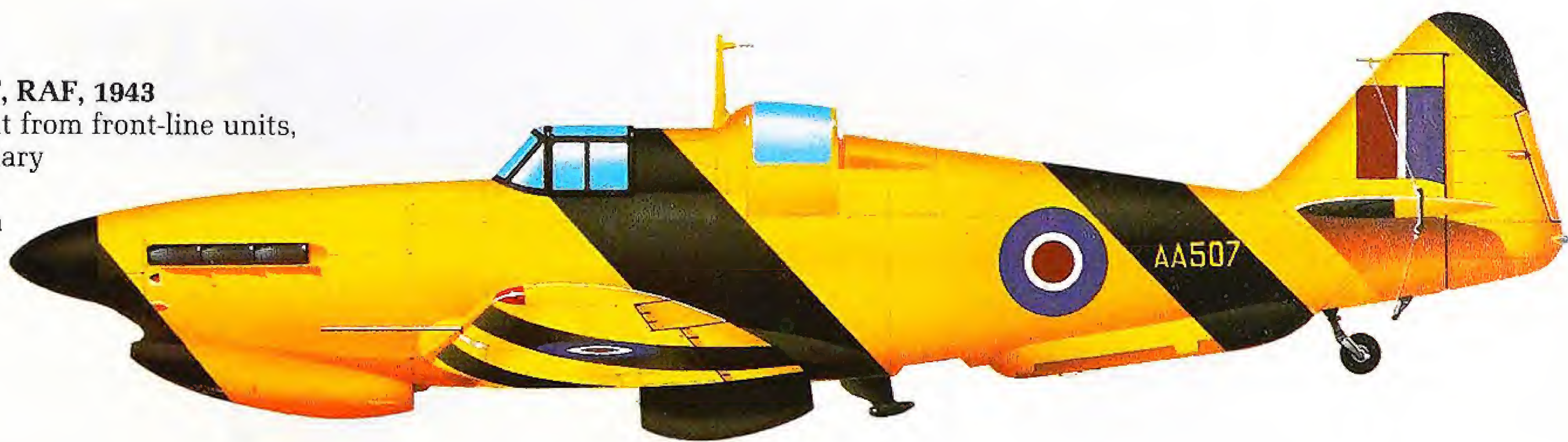
Mk II, 151 SQUADRON, RAF WITTERING, UK, 1942

Special Night Finish was the overall black color specified for application to RAF aircraft from the beginning of 1941. Codes were Dull Red and the Type C.1 roundel with 24in square fin flash date the scheme from mid 1942. Of the 14 squadrons with Defiant night fighters, four only were fully equipped with the Mk II version.



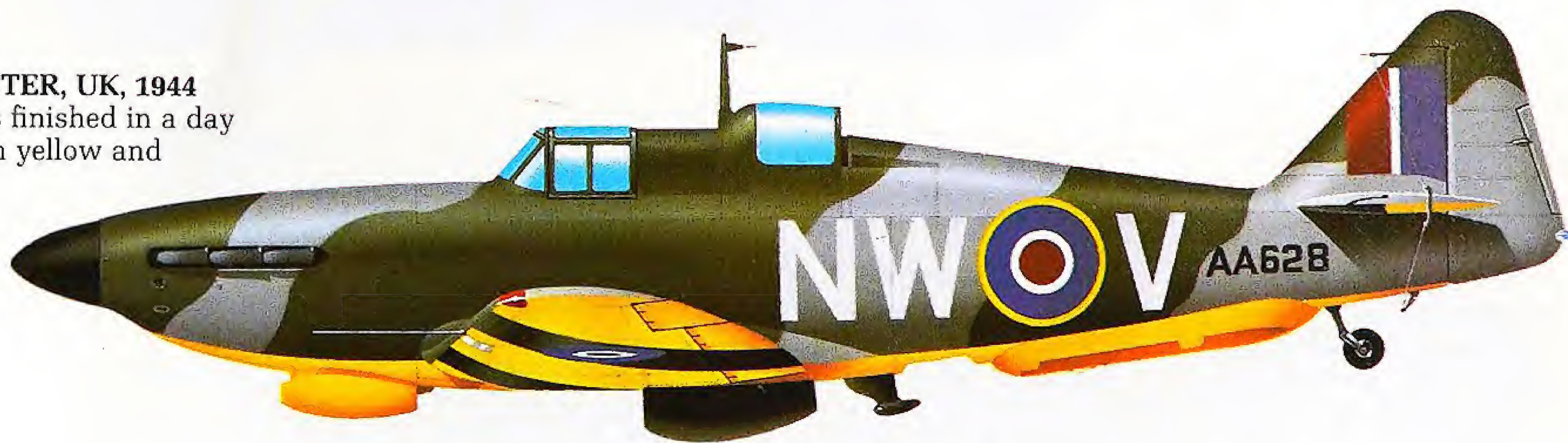
TT.II, TARGET FACILITIES UNIT, RAF, 1943

With the withdrawal of the Defiant from front-line units, the type was developed for secondary duties such as target towing. This example, operated by an unknown unit displays the standard black and yellow scheme for this role. The tropical filter under the nose indicates a Middle Eastern base.



TT.I, 286 SQUADRON, RAF, EXETER, UK, 1944

Built as a Mk III, this target tug is finished in a day fighter disruptive camouflage with yellow and black stripes on the undersides. The aircraft was operated over the Bristol Channel and the West Country.

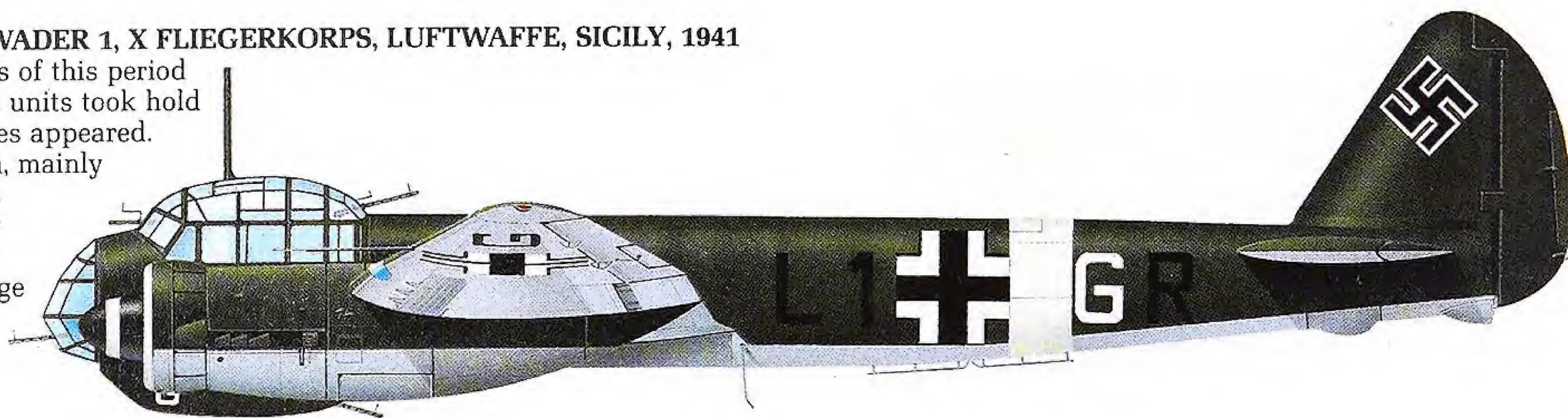


JUNKERS Ju 88

Probably the most versatile of all Germany's 1939–45 warplanes, the Ju 88 was developed through a series of different versions for tasks ranging from its originally designed role as a bomber, through ground-attack and night-fighting, to reconnaissance and high-speed courier aircraft. The Ju 88 V1 flew in December 1936 and production aircraft joined the first unit early in 1939. Nearly 15,000 had been built by the end of the war.

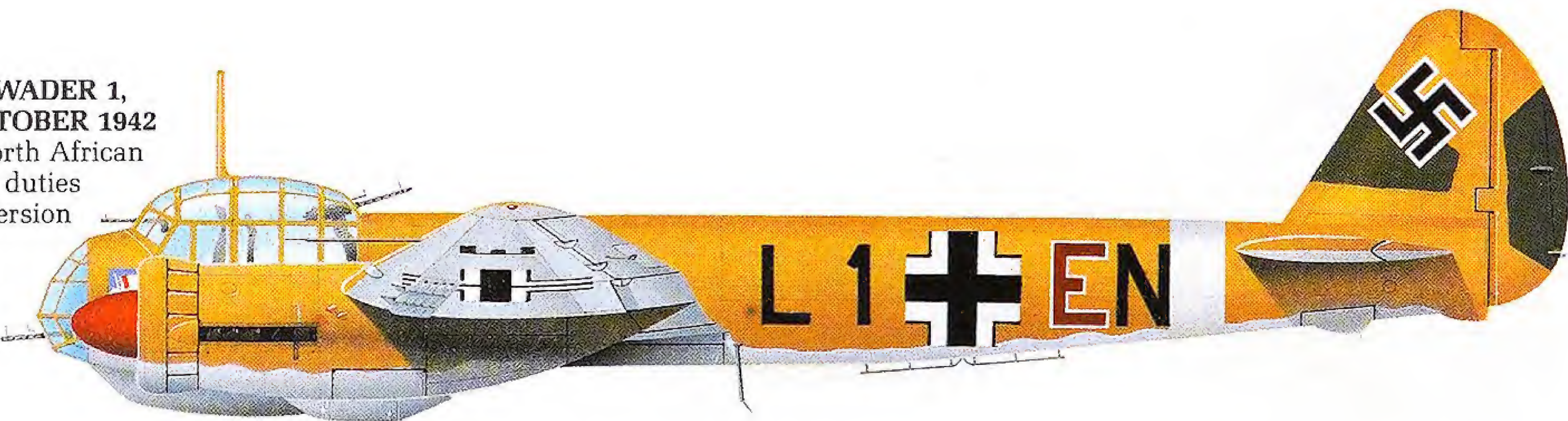
Ju 88A-5, III/LEHRGESCHWADER 1, X FLIEGERKORPS, LUFTWAFFE, SICILY, 1941

Standard finish for bombers of this period before improvisation by the units took hold and more disruptive schemes appeared. LG 1 operated from Catania, mainly on anti-shipping operations around Malta between May 1941 and May 1942. White theater band around fuselage only.



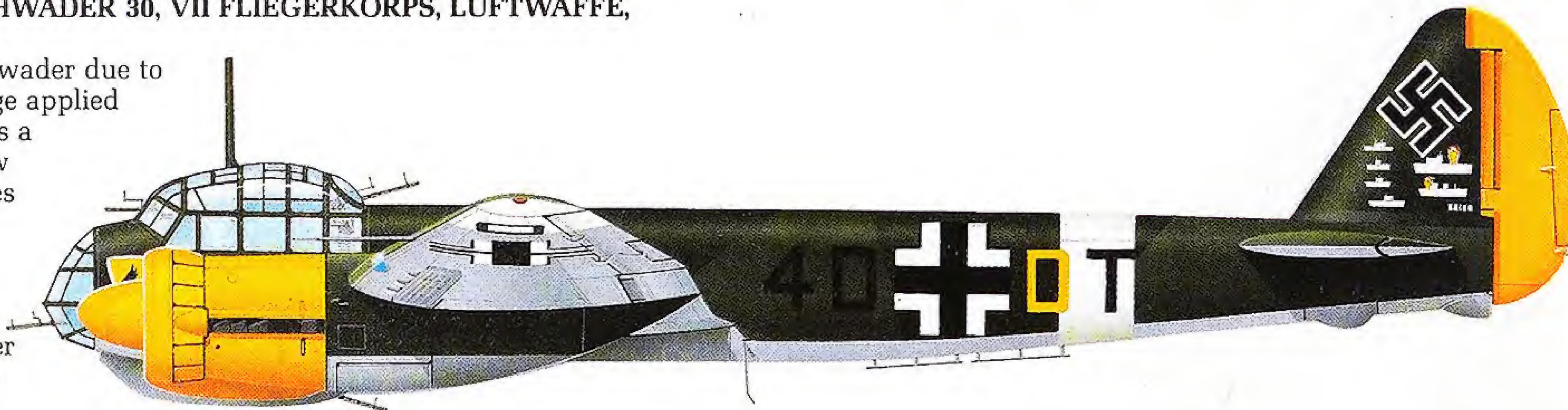
Ju 88A-10, II/LEHRGESCHWADER 1, LUFTWAFFE, CRETE, OCTOBER 1942

Hastily redeployed from North African operations to anti-shipping duties in Crete, this tropicalized version of the A-5 bomber retains its desert camouflage until an extended maintenance check is needed and a more appropriate color scheme can be applied.



Ju 88A-4, III/KAMPFGESCHWADER 30, VII FLIEGERKORPS, LUFTWAFFE, MEDITERRANEAN, 1941

Known as the Adler Geschwader due to the unit's diving eagle badge applied to the nose, this aircraft has a confusing mixture of yellow Balkan markings on engines and rudder with white Mediterranean wing tips and fuselage band. The ship silhouettes on the fin indicate a number of successful anti-shipping missions.



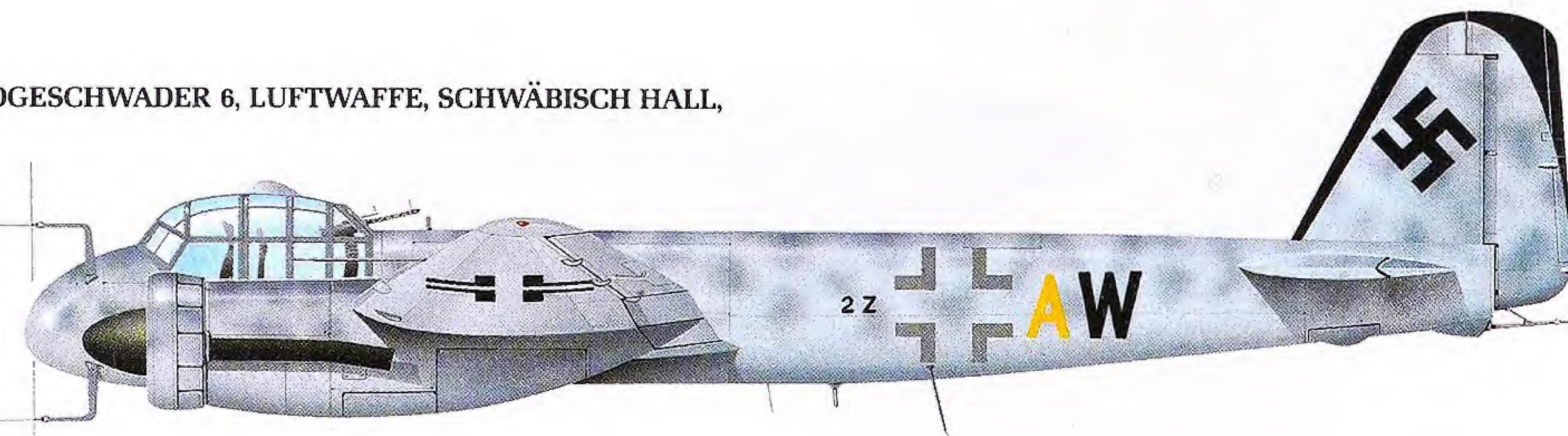
Ju 88 A-4, I/KAMPFGESCHWADER 54, LUFTWAFFE, ITALY, SEPTEMBER 1943

This unusual finish was dubbed Wellenmuster (wave pattern) camouflage and was sprayed over the existing color scheme. It was intended specifically for low-level over-water operations and this aircraft flew attacks against the Allied landings at Salerno.



Ju 88G-7a, IV/NACHTJAGDGESCHWADER 6, LUFTWAFFE, SCHWÄBISCH HALL, GERMANY, 1944–5

A light gray finish was adopted by Luftwaffe night fighters. Markings were usually black or dark gray and on this aircraft the tail has been painted to resemble that of the lower performance Ju 88C variant.

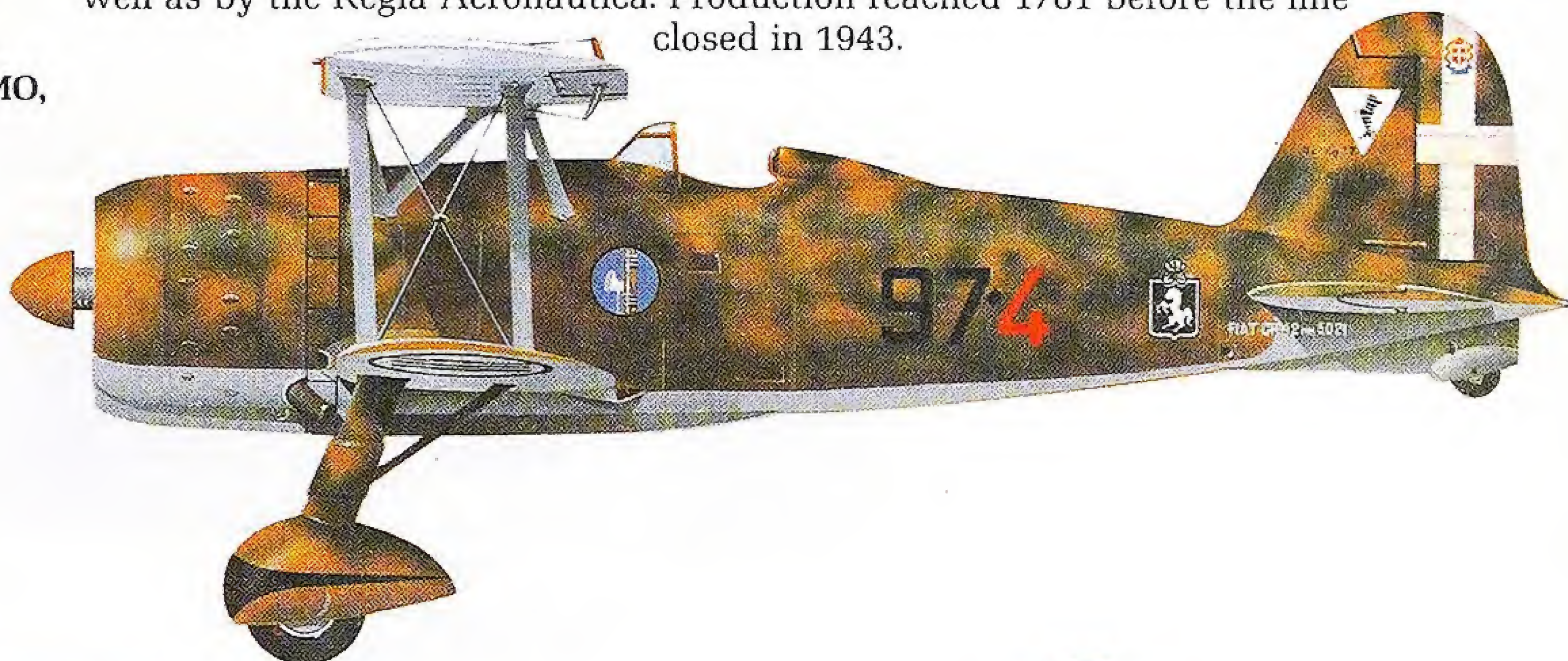


FIAT CR.42

At the end of the 1930s, while the main fighter design teams in the industrial countries were working on monoplane (and often stressed-skin) fighters, Italy's Fiat company was still perfecting the biplane and exporting the fruits of its designs. The CR.42 was the last of the breed and probably the best; but it was pitted against faster and more heavily armed opponents such as the Hurricane, against which it stood little chance of success. It was nevertheless ordered by Belgium, Hungary and Sweden as well as by the Regia Aeronautica. Production reached 1781 before the line closed in 1943.

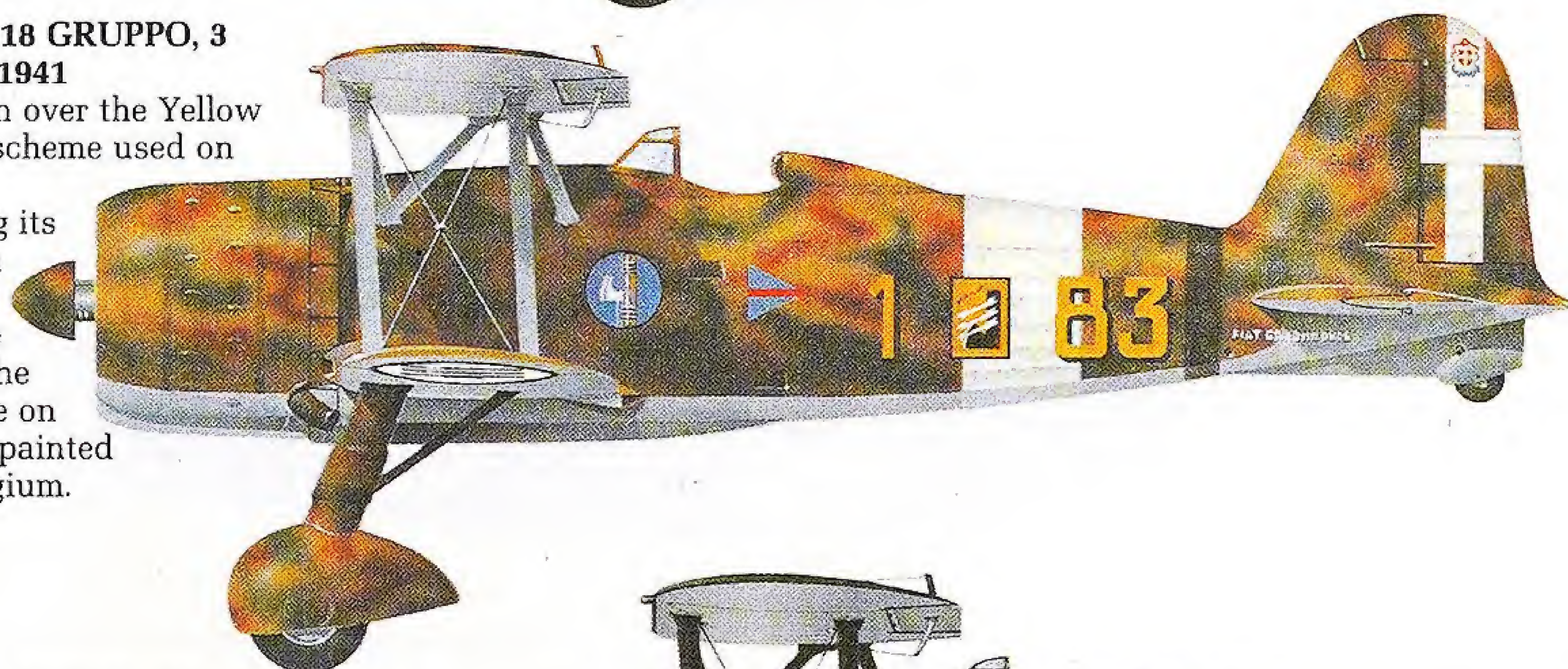
CR.42, 97 SQUADRIGLIA, 9 GRUPPO, 4 STORMO, BENINA, LIBYA, 1940

Desert camouflage of Dark Green heavily mottled over the Yellow Ocher top-surface color. On the fin is the "Leg" emblem of the 97th and on the rear fuselage is the "Rampant Horse" of No 4 Stormo. This particular machine was abandoned to British troops during the Axis retreat.



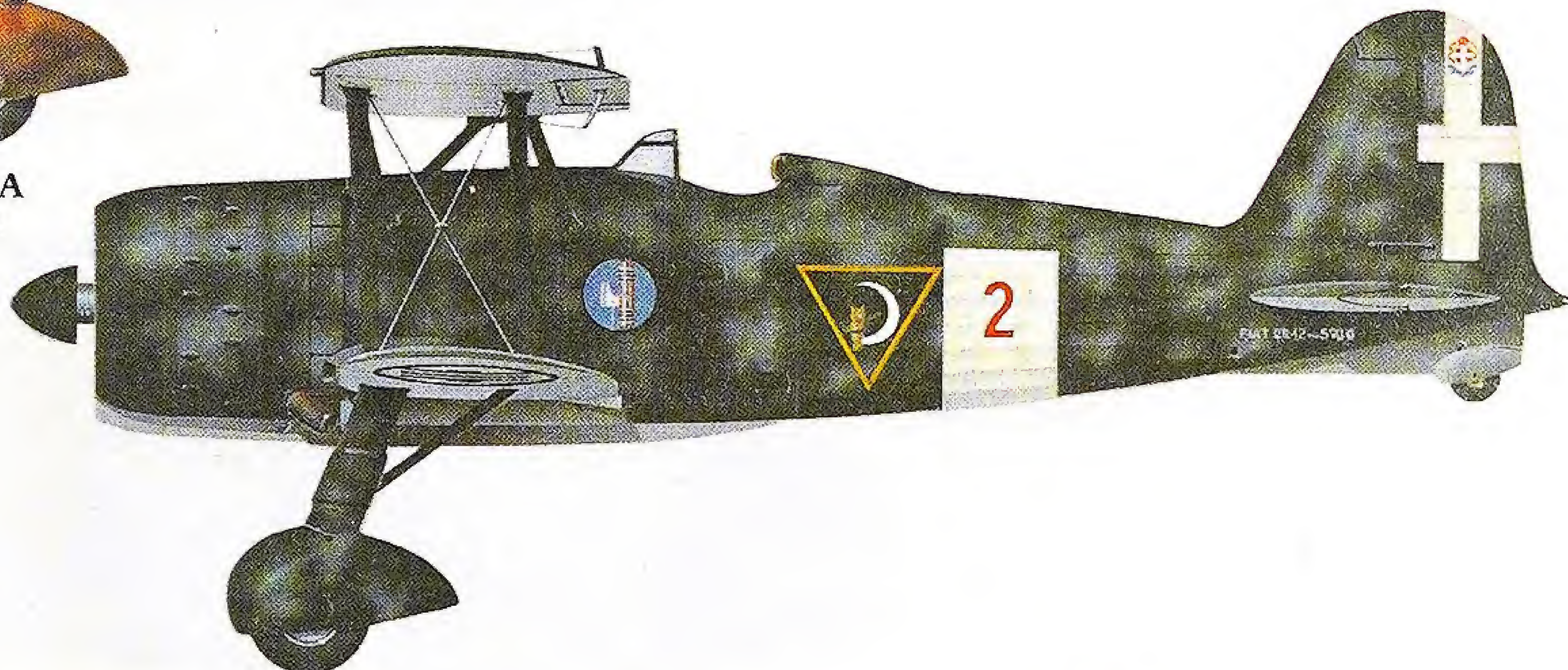
CR.42, 83 SQUADRIGLIA, 18 GRUPPO, 3 STORMO, LIBYA, EARLY 1941

Dark Green and Red-Brown over the Yellow Ocher was another desert scheme used on Italian fighters, and it was retained by this unit during its brief series of operations in 1940 against the UK when based in Belgium. A Cmdte pennant is painted under the cockpit, and the dark stripe on the rear fuselage is an overpainted white marking used in Belgium.



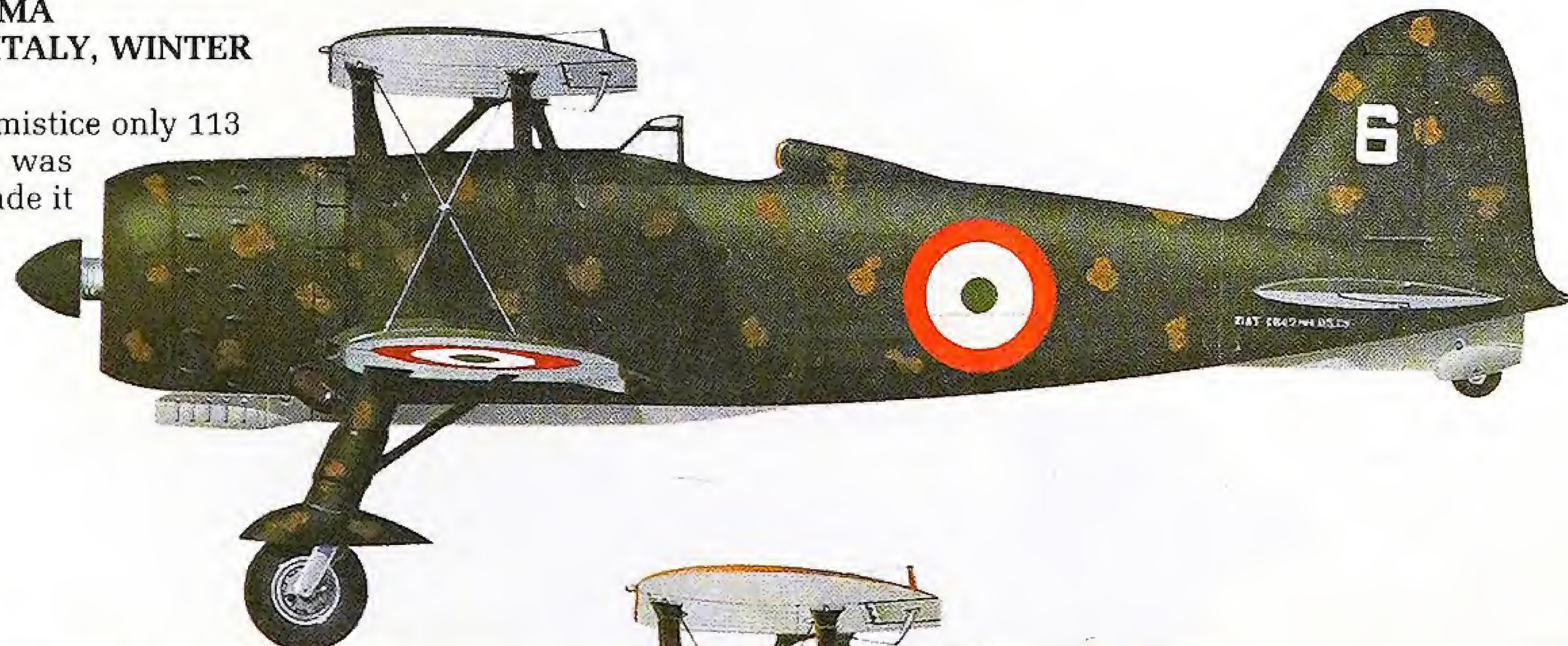
CR.42, 377 SQUADRIGLIA AUTONOMA, REGIA AERONAUTICA, PALERMO, SICILY, MID 1942

Night-fighter operations to combat RAF raids were first attempted in Sicily in October 1941, but success was limited. Farther north, other aircraft achieved more against the attacks on Italy's industrial heartland. The unit insignia was an owl on a new moon.



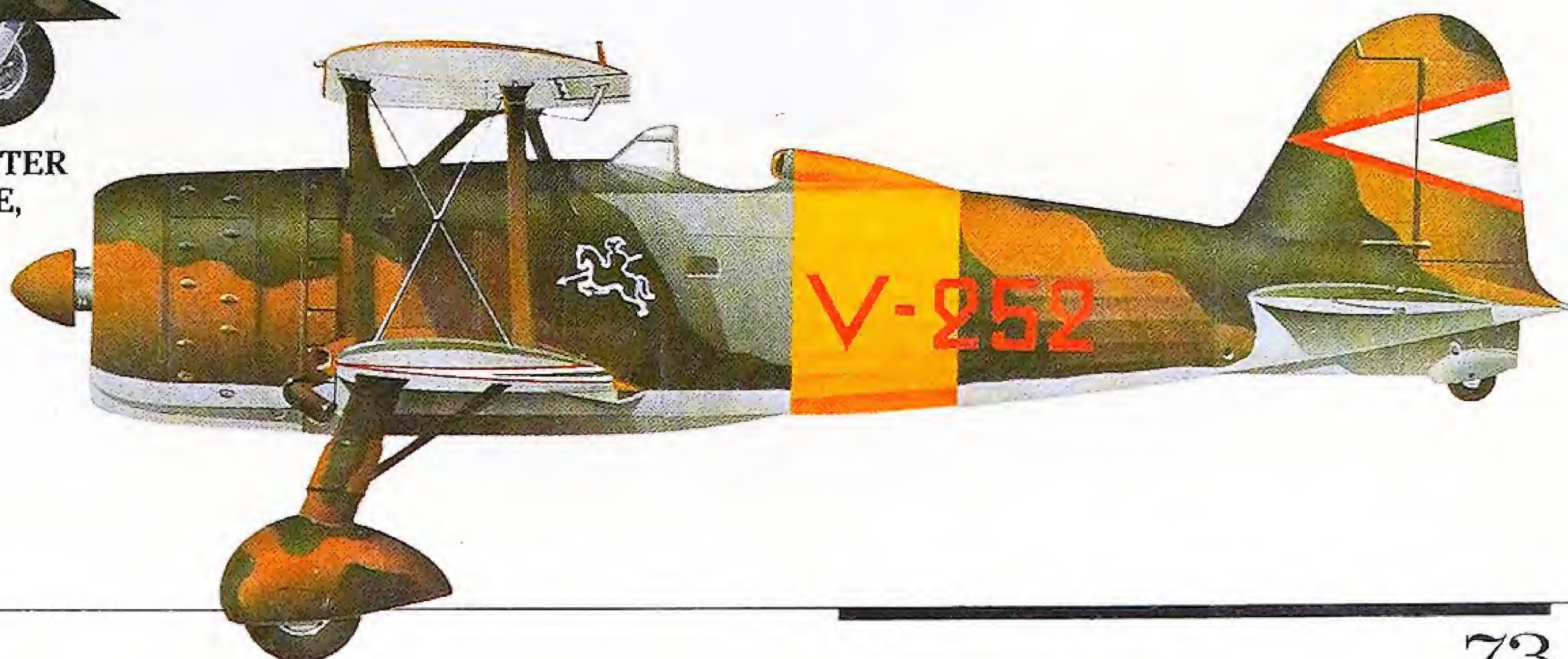
CR.42, SEZIONE AUTONOMA COLLEGAMENTI, ROME, ITALY, WINTER 1945-6

At the time of the Italian armistice only 113 Falcos remained in use; this was one of the survivors that made it to the post-war air force. Some were used as training aircraft and painted silver.



CR.42, 1/4 SQUADRON, 1/11 GROUP, 1st FIGHTER REGIMENT, ROYAL HUNGARIAN AIR FORCE, BUDAPEST, HUNGARY, 1941

One of the 50 aircraft exported to Hungary and used in the Eastern Front War against the Russians, mainly in the ground-attack role. On the fuselage side is the Squadron's St George insignia.

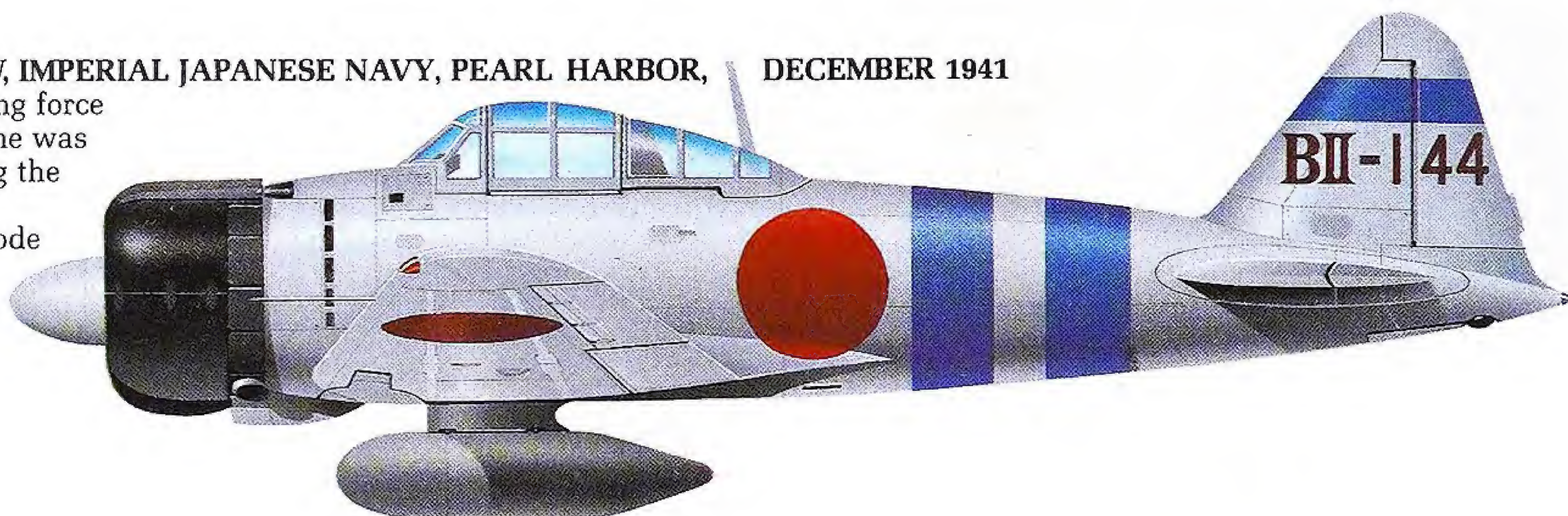


MITSUBISHI ZERO-SEN

The most famous of all Japanese warplanes, the A6M series was the Navy's principal carrier-based fighter throughout the war. Under the Allied code-name system, the Reisen was called Zeke and when the clipped-wing A6M3 appeared it was allocated Hamp. However, to most people it was known as Zero. The prototype flew in April 1939, and early production aircraft first saw action in China. Four main variants were developed (A6M2, -3, -5 and -8) and by the end of the war some 10,450 had been built.

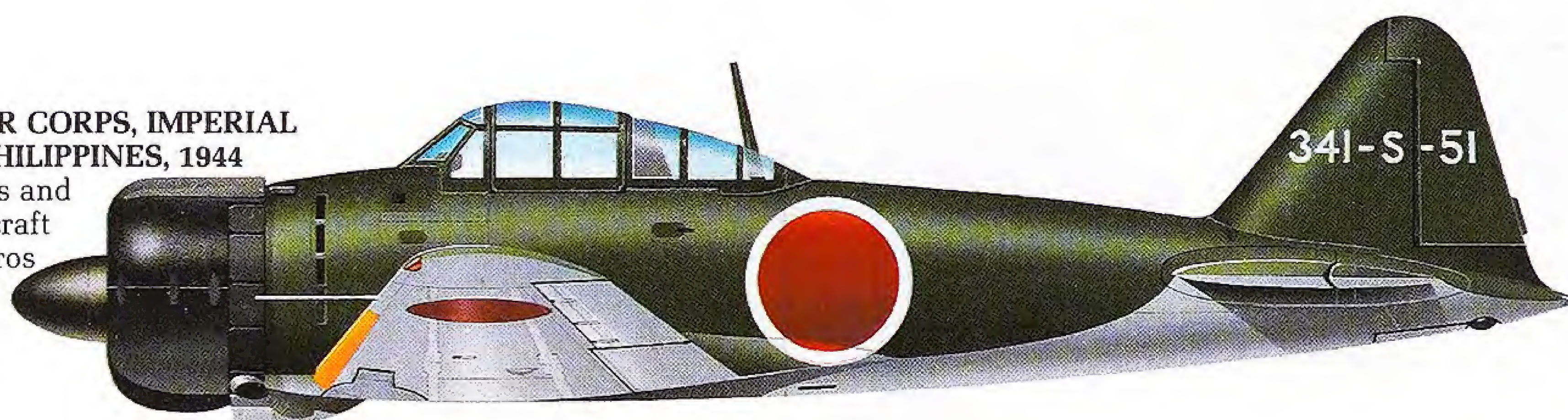
A6M2, AIRCRAFT CARRIER *HIRYU*, IMPERIAL JAPANESE NAVY, PEARL HARBOR, DECEMBER 1941

This machine was part of the attacking force on the "day of infamy." Overall scheme was Light Gray (N10), with blue signifying the Second Air Division, the two stripes indicating the second ship. The tail code BII also meant the same (B = 2nd AD, II = 2nd ship).



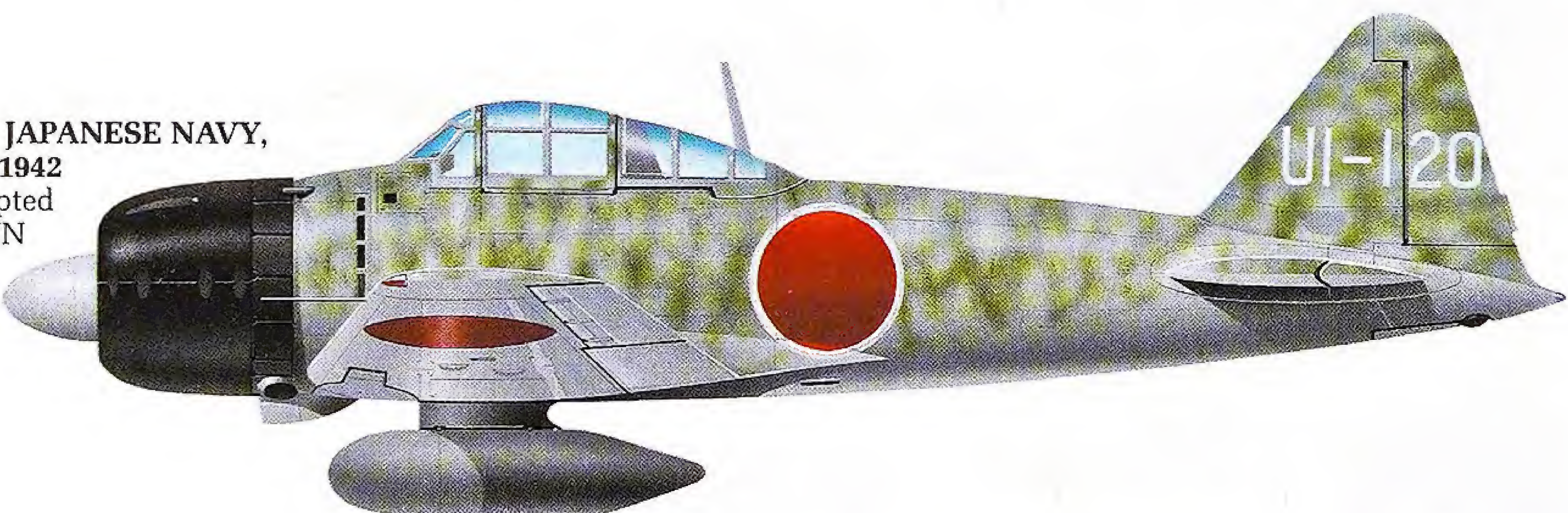
A6M2, 402ND SQUADRON, 341st AIR CORPS, IMPERIAL JAPANESE NAVY, CLARK FIELD, PHILIPPINES, 1944

With Black Green (N1) upper surfaces and Light Gray (N10) undersides, this aircraft typified the general appearance of Zeros during the Pacific war. On the wing leading edge is the standard yellow (N14) identification marking applied from 1943 to the end of 1944.



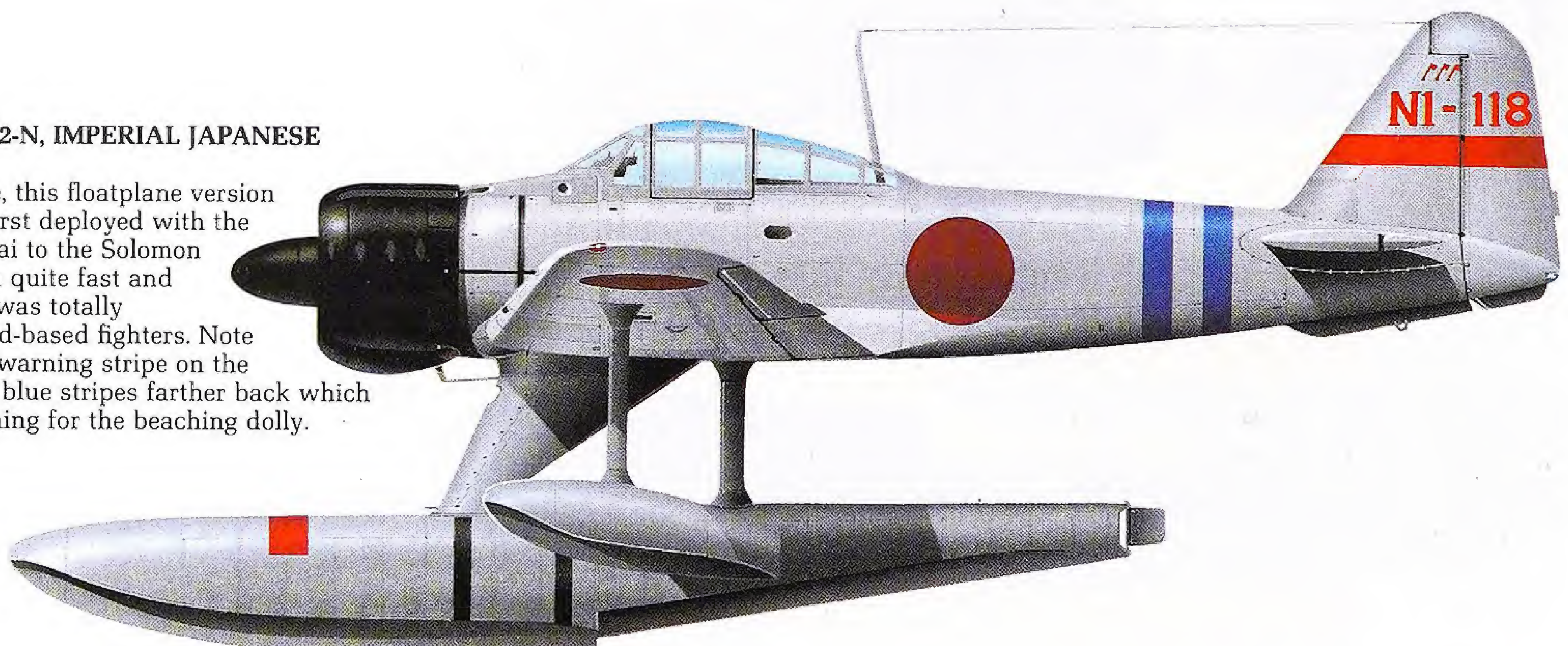
A6M3, 251st AIR CORPS, IMPERIAL JAPANESE NAVY, FORMOSA, (TAIWAN) NOVEMBER 1942

This mottled scheme began to be adopted towards the end of 1942. Almost all IJN radial-engined aircraft had their entire engine cowlings painted semi-gloss black or matt black-gray as an anti-glare measure.



NAKAJIMA A6M2-N, IMPERIAL JAPANESE NAVY, 1942

Code-named Rufe, this floatplane version of the Zero was first deployed with the Yokohama Kokutai to the Solomon Islands. Although quite fast and maneuverable, it was totally outclassed by land-based fighters. Note the red propeller warning stripe on the float and the two blue stripes farther back which indicated positioning for the beaching dolly.



BRISTOL BEAU- FIGHTER

A long-range heavy fighter, the Beaufighter used some 75 per cent of the components of the Beaufort bomber and incorporated a formidable armament of four 20mm cannon in the belly and six .303in machine-guns in the wings. It operated in most theaters in World War II and is best remembered for its night-fighter, coastal-strike and ground-attack roles. With a crew of two, it had a maximum speed of 321mph at 15,800ft.

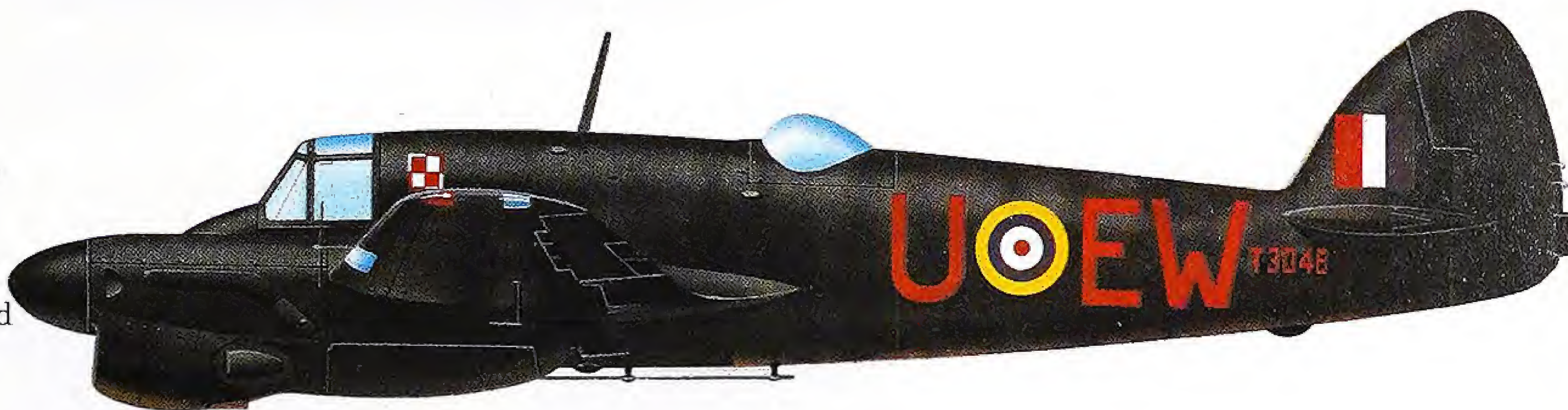
Mk 1F, 25 SQUADRON, RAF NORTH WEALD, UK, 1940

This aircraft carries standard day fighter colors of Dark Green, Dark Earth and Sky undersurfaces. It has 35in diameter Type A1 fuselage roundels and 45in diameter Type A underwing roundels. 25 Sqn was, with 29 Sqn, the first unit to receive Beaufighters.



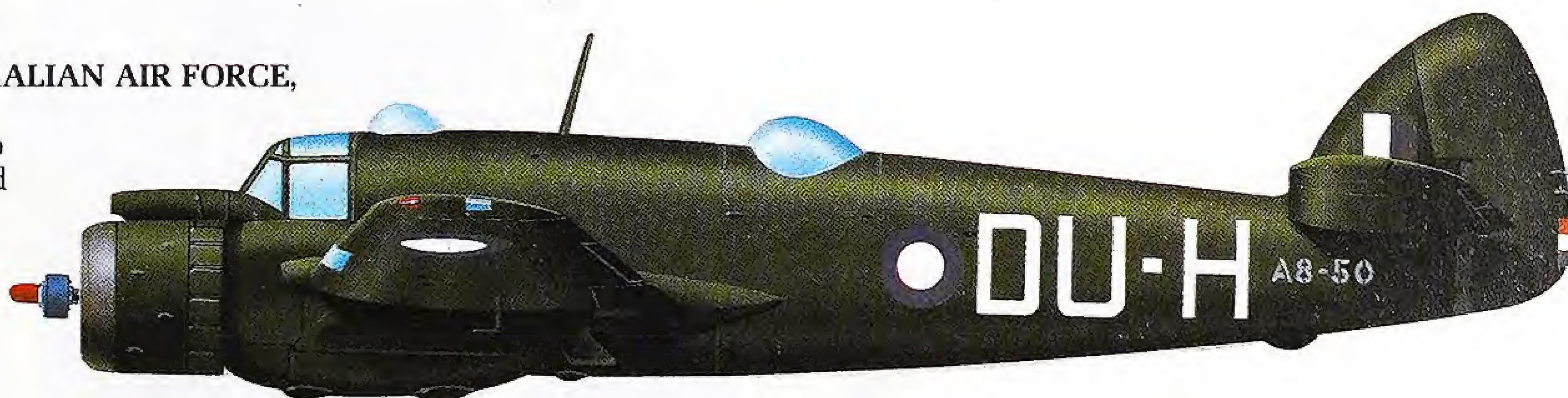
Mk II 307 (POLISH) SQUADRON, RAF EXETER, UK, 1941

It has overall Special Night (RDM2) matt black finish, dull Red codes, serial and badge, 24 x 27in fin flash and 35in diameter fuselage roundel.



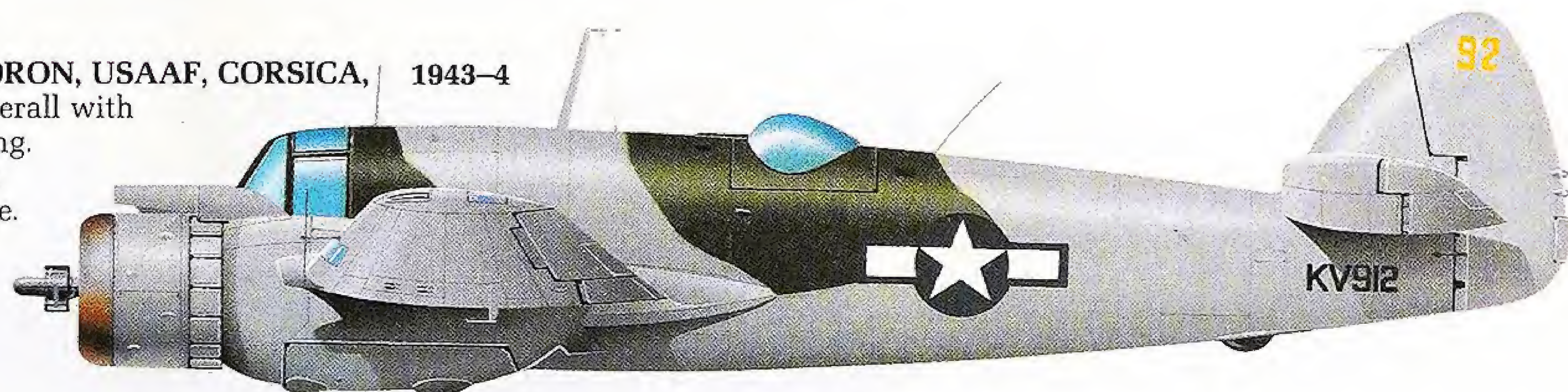
Mk XXI, 22 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, SANGA SANGA, PHILIPPINES, 1945

Red has been deleted from all markings to avoid any confusion with the Japanese red disc insignia.



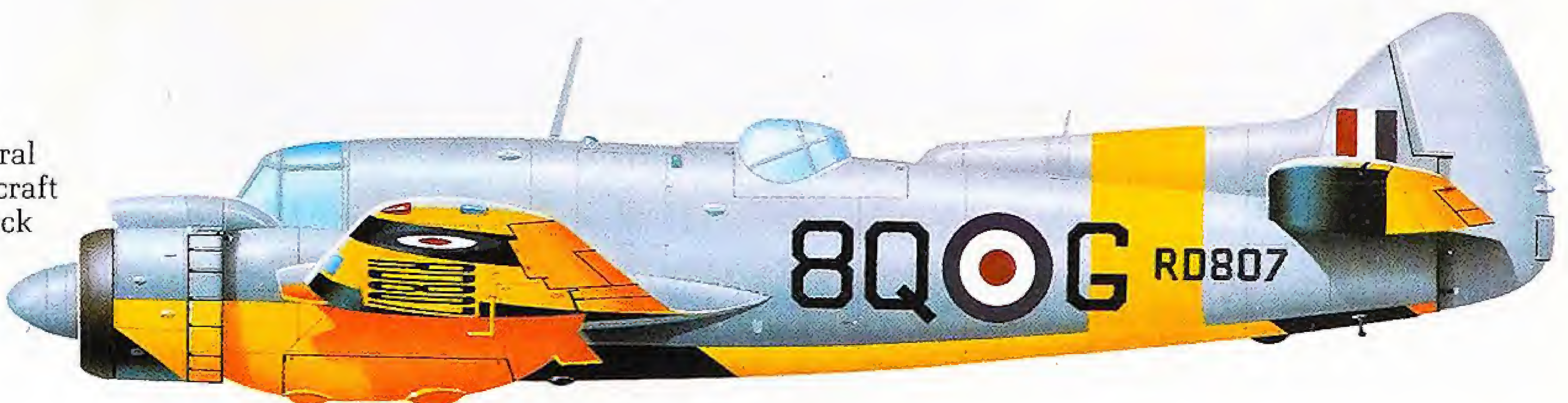
Mk VIF, 416th NIGHT FIGHTER SQUADRON, USAAF, CORSICA, 1943-4

The color scheme is Medium Sea Gray overall with Dark Green upper surface shadow-shading. The star marking is found above the port wing only and on the sides of the fuselage.



Mk TT 10, 34 SQUADRON, RAF, 1950's

This final Beaufighter variant has a natural metal finish. It was employed on anti-aircraft co-operation duties, and the diagonal black and yellow stripes on the undersides of the wing denote its role as a target tug. The last example was withdrawn from service in 1960.

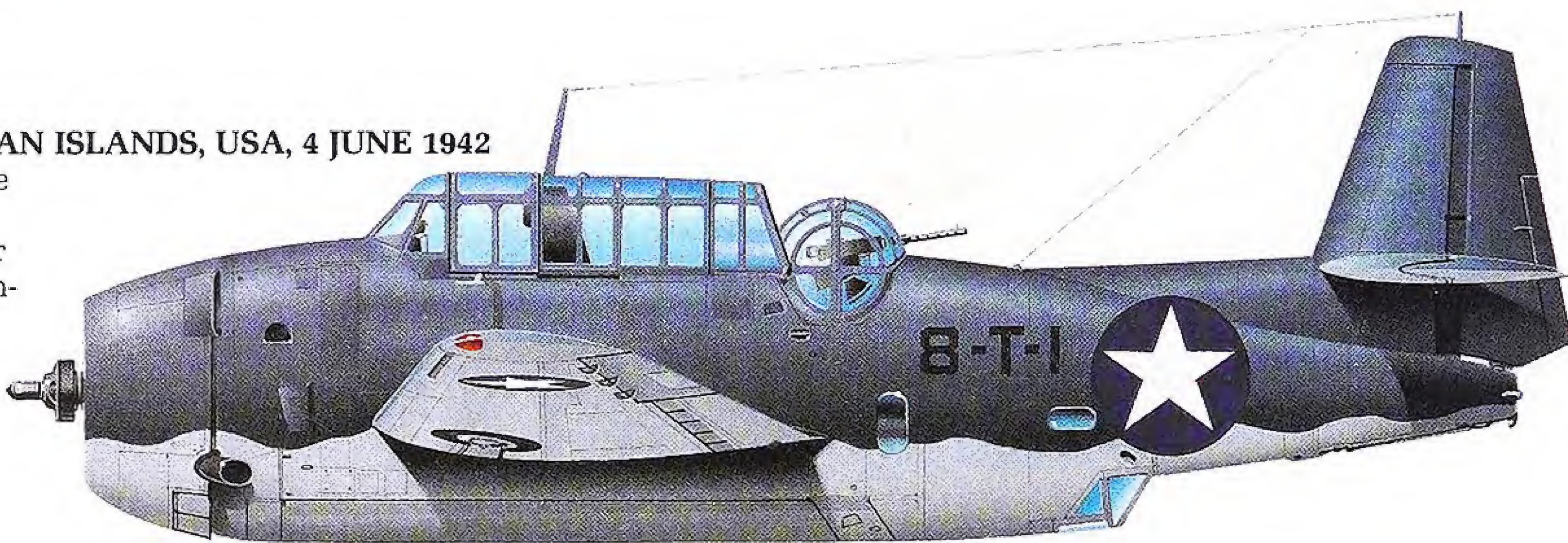


GRUMMAN AVENGER

Despite losing five of the six aircraft despatched during its baptism of fire at the Battle of Midway in June 1942, the Avenger survived in service to become one of the outstanding torpedo bombers of World War II. Greatly modified, it continued in use until the 1960s. The prototype first flew on 7 August 1941. Grumman built 2291 TBF-1s before production switched to Eastern Aircraft, where 7543 TBM-1 and -3s were built. No less than 26 different models were in existence by 1946.

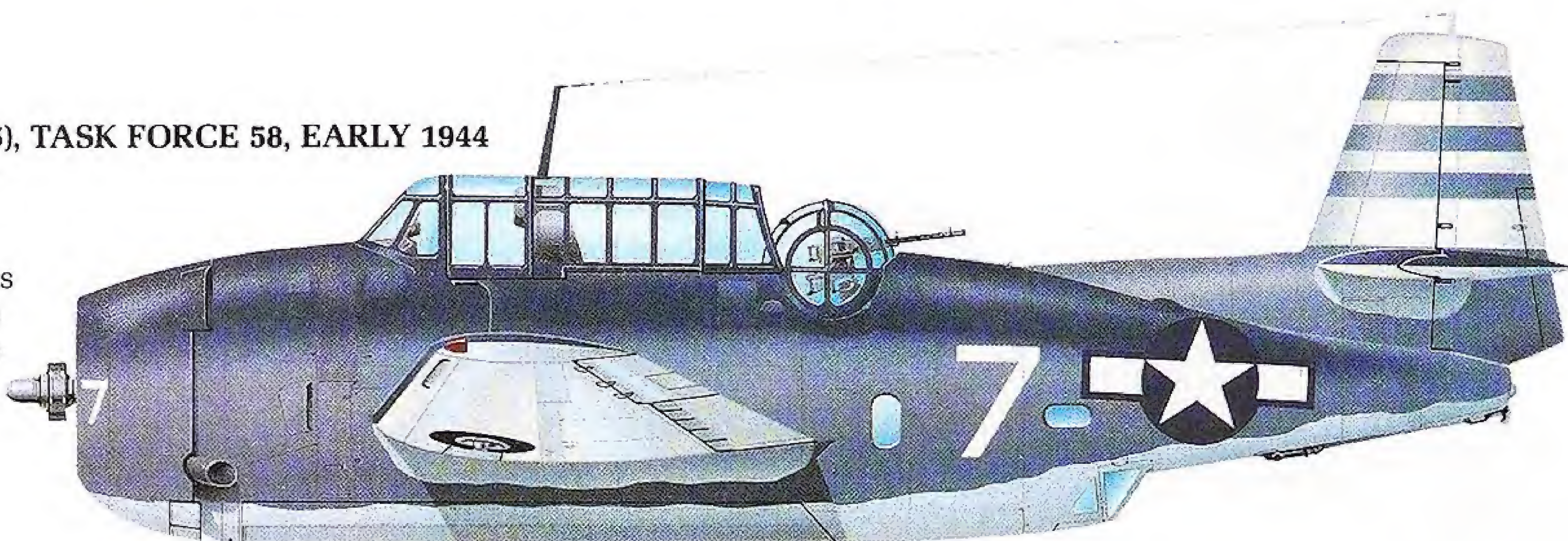
TBF-1, VT-8, US NAVY, MIDWAY, HAWAIIAN ISLANDS, USA, 4 JUNE 1942

One of the five aircraft shot down during the Avenger's first combat sortie. At this time the colors were Non-specular Blue Gray over all top surfaces and fuselage sides, with Non-specular Light Gray on the undersurfaces.



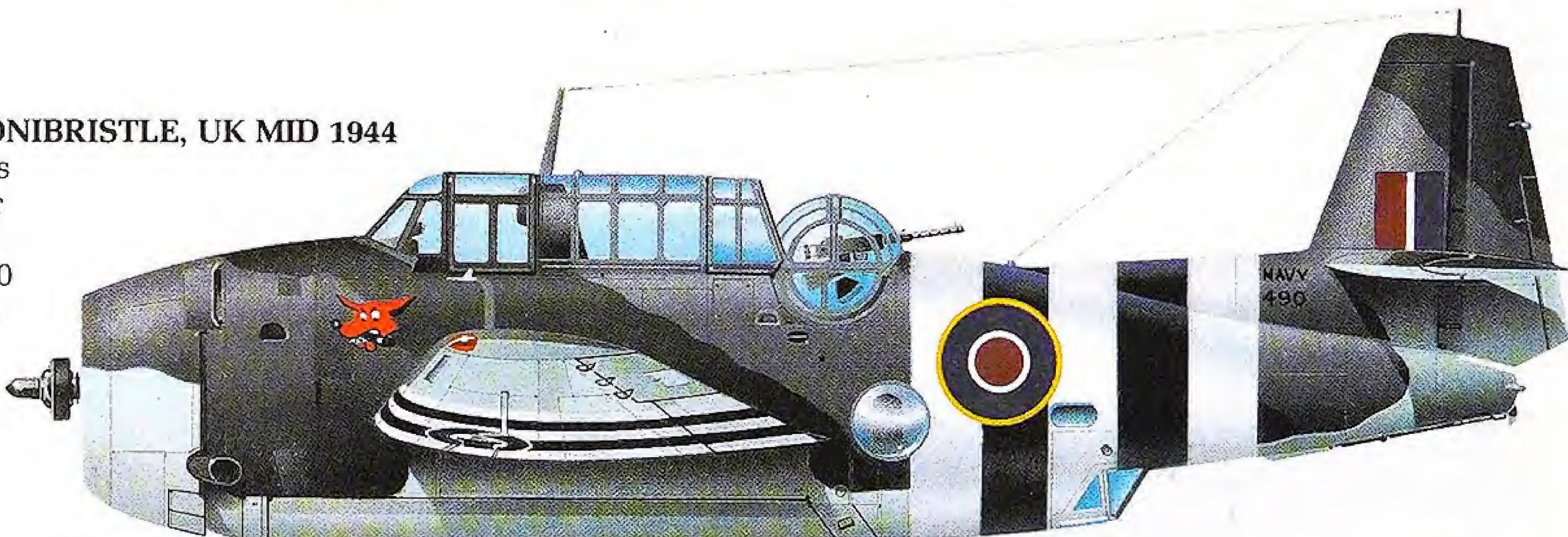
TBM-3, US NAVY, USS RANDOLPH (CV-15), TASK FORCE 58, EARLY 1944

Standard three-tone camouflage for the mid-war period (see the Hellcat for colors), with white stripes denoting the carrier and the aircraft number on the fuselage and nose. As an alternative to the single 22in torpedo, the Avenger's internal bomb-bay could carry up to 2000lb of bombs or mines.



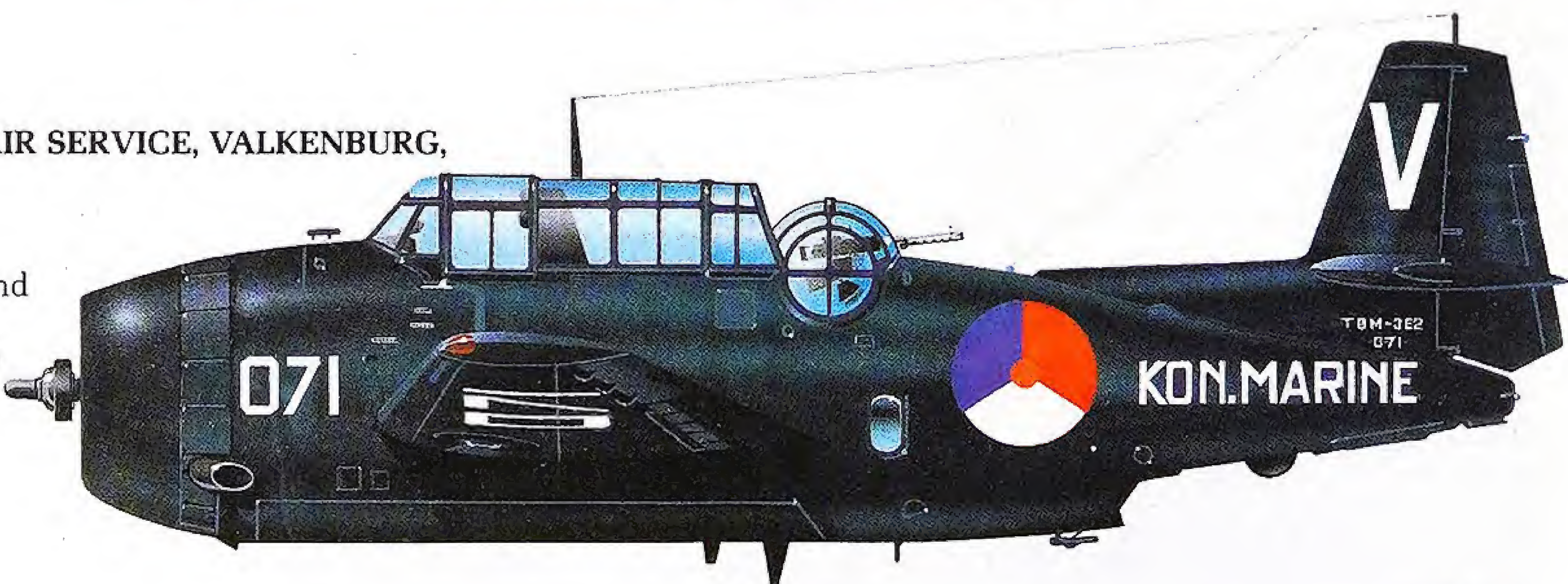
AVENGER Mk II, ROYAL NAVY, RNAS DONIBRISTLE, UK MID 1944

Invasion bands circle the fuselage and wings of an aircraft with a fox head insignia under the cockpit, but there is little else to identify it apart from the partly obscured serial JZ490 on the dorsal fin. The RN received more than 950 Avengers, calling them Tarpons until January 1944.



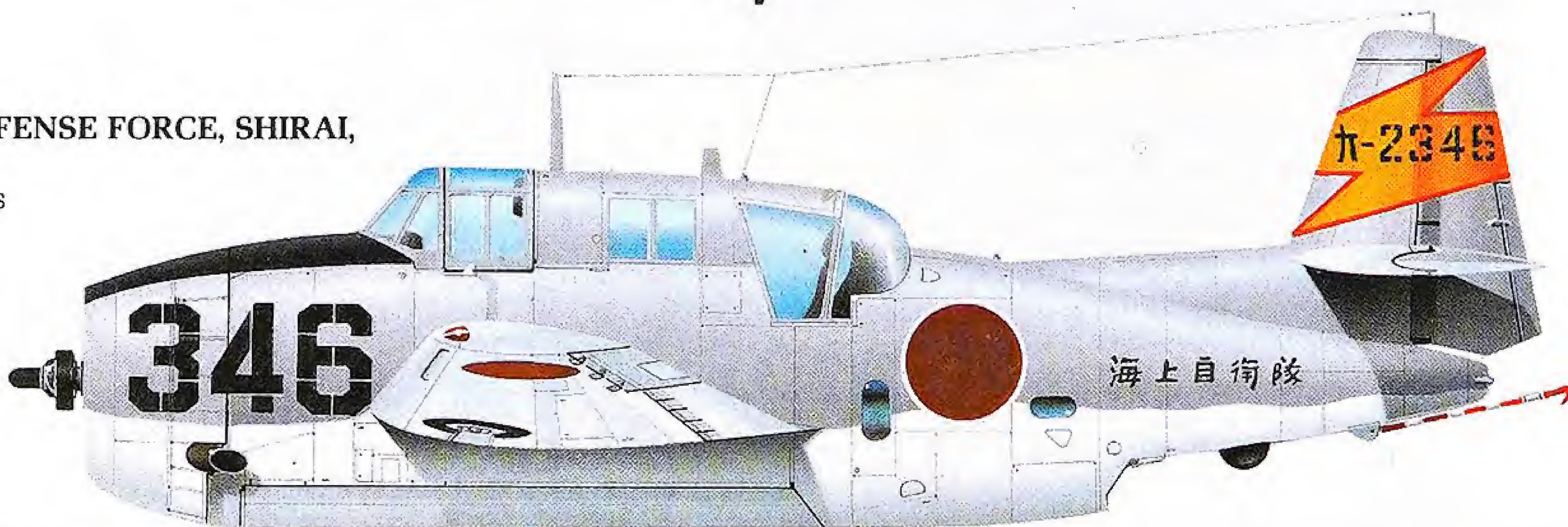
TBM-3, ROYAL NETHERLANDS NAVAL AIR SERVICE, VALKENBURG, NETHERLANDS, 1954

One of 50 Avengers which equipped two squadrons of the Dutch Navy, one being shore-based and given the fin marking V, and the other flying off the aircraft carrier Karel Doorman (now 25 de Mayo of the Argentine Navy). USN Glossy Sea Blue was retained.



TBM-3S2, JAPANESE MARITIME SELF-DEFENSE FORCE, SHIRAI, JAPAN, 1960

The Japanese began receiving ASW versions of the Avenger in 1955, but their use was relatively short-lived and most had been withdrawn by 1961. Ironical that an aircraft that helped defeat the Japanese should end up defending them! This particular example was used for crew training.



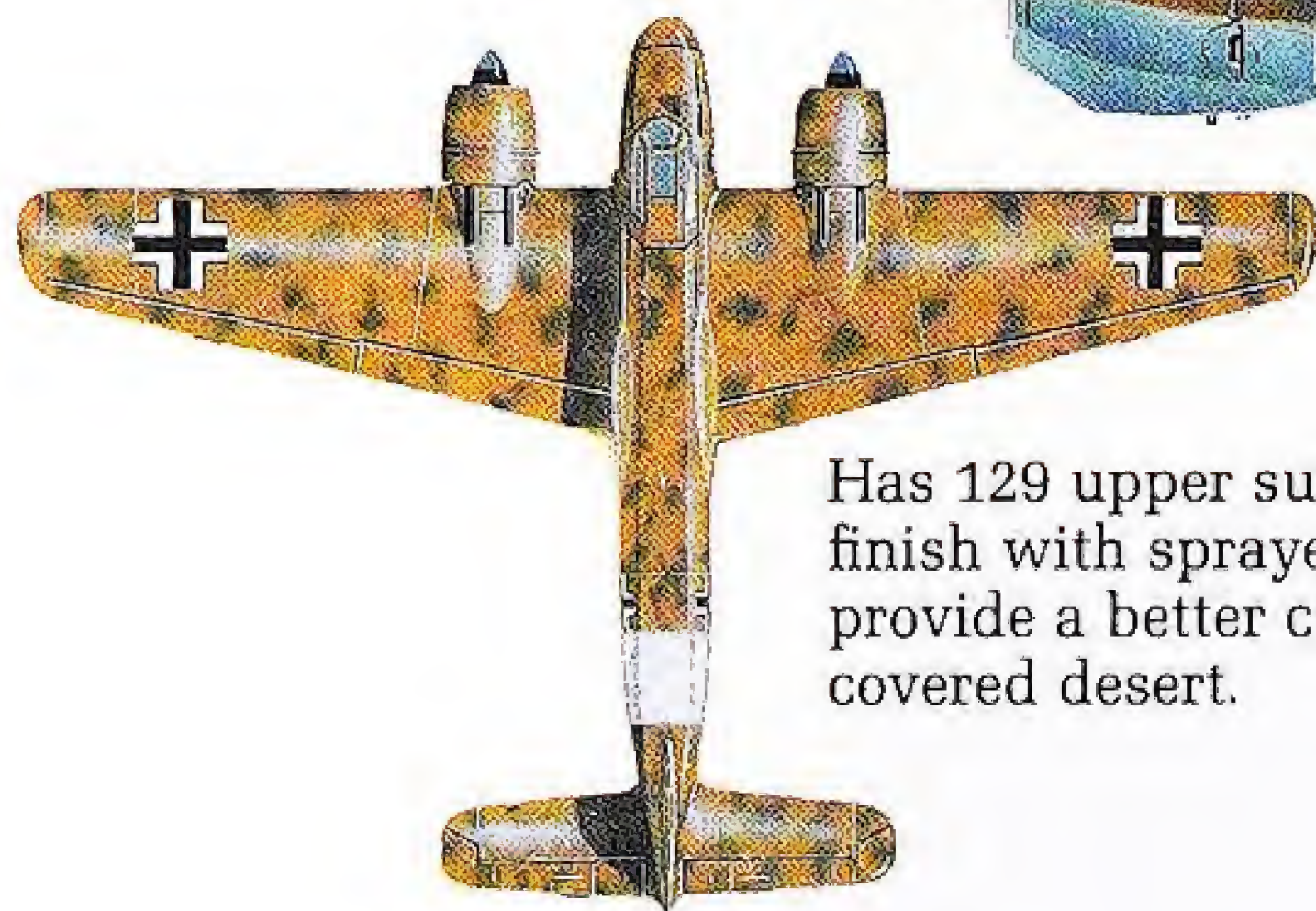
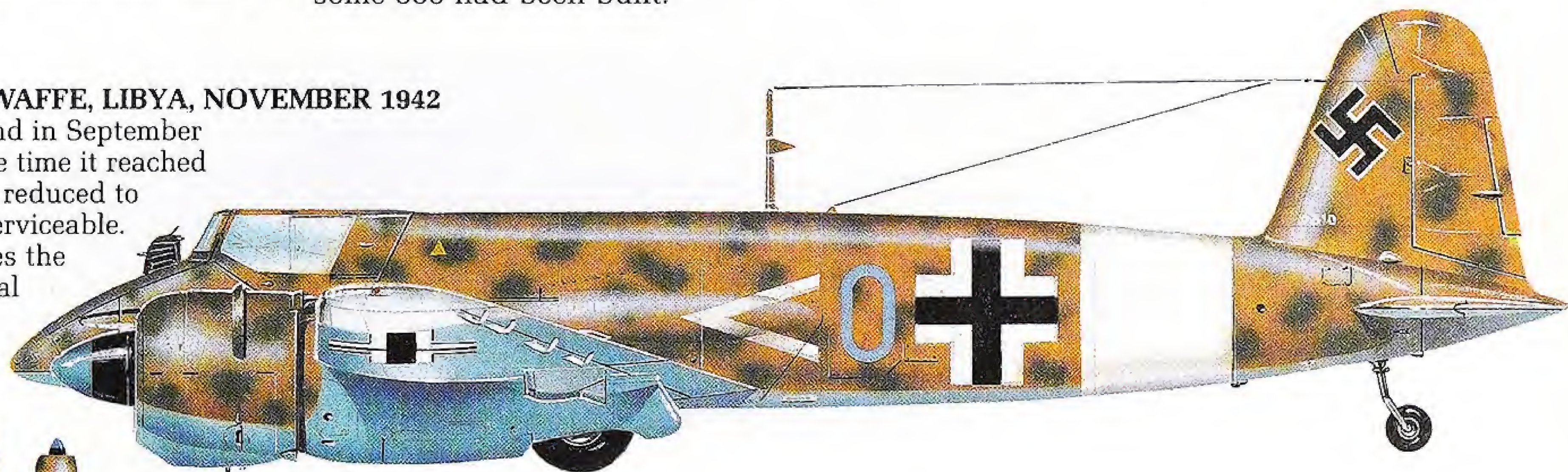
HENSCHEL

Hs 129

Poor handling and plagued with serviceability problems, the Hs 129 struggled to achieve what it was designed to do, namely tank busting using heavy caliber cannon and light bombs. It was intended that this heavily armored attack aircraft would replace the Ju 87D Stuka, but it never gained the reliability of the older aircraft. The initial Hs 129A was powered by two Argus in-line engines, these being replaced in the B variant with unreliable Gnôme-Rhone 14Ms. Production terminated in 1944 after some 866 had been built.

Hs 129B-1, 4./SCH.G.2, LUFTWAFFE, LIBYA, NOVEMBER 1942

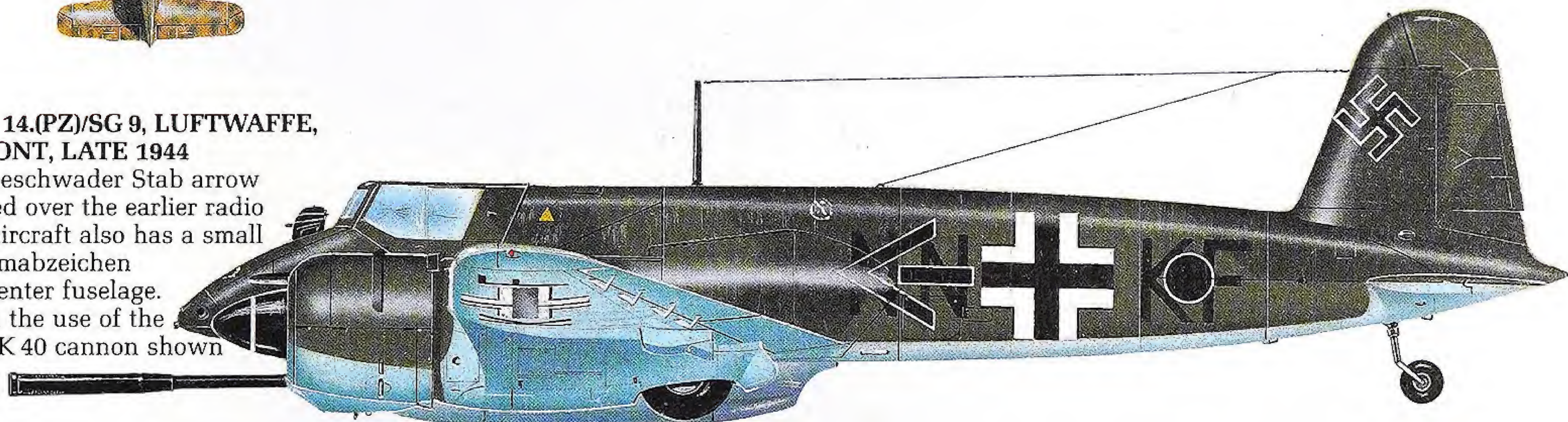
This unit was formed in Poland in September 1942 with 12 machines. By the time it reached North Africa its strength was reduced to eight, of which half were unserviceable. The fuselage marking indicates the pilot was the Gruppe Technical Officer.



Hs 129 upper surface view showing the sand finish with sprayed blotches of dark green to provide a better camouflage for the scrub-covered desert.

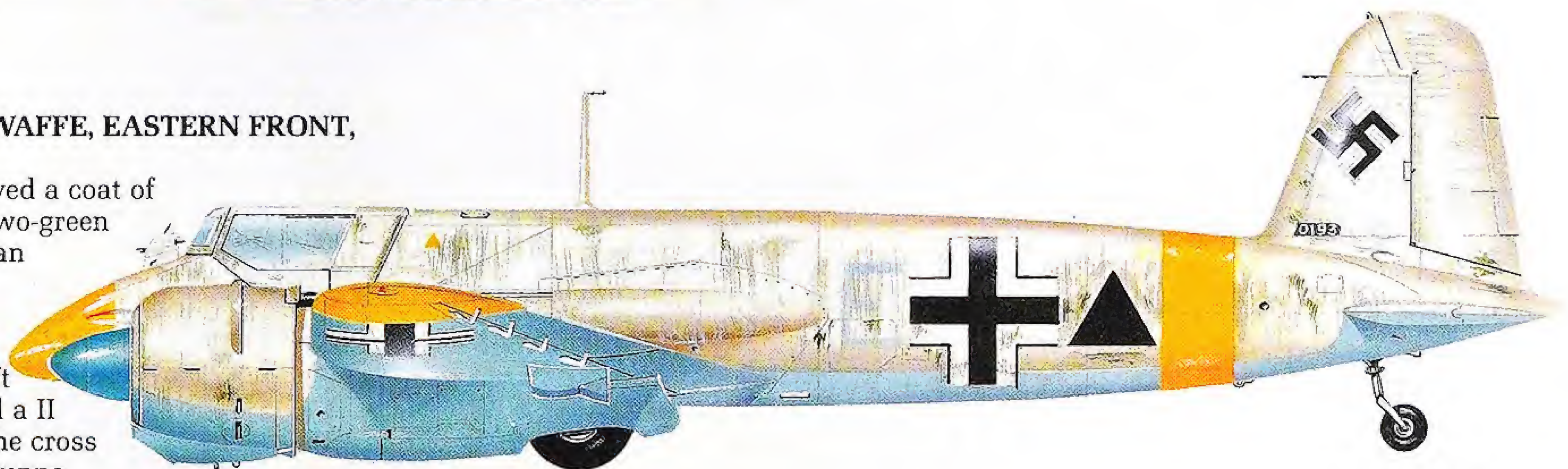
Hs 129B-3/Wa, 14.(PZ)/SG 9, LUFTWAFFE, EASTERN FRONT, LATE 1944

Carrying the Geschwader Stab arrow marking applied over the earlier radio call sign, this aircraft also has a small Infanterie-Sturmabzeichen badge on the center fuselage. SG 9 pioneered the use of the large 75mm PaK 40 cannon shown fitted under the fuselage.



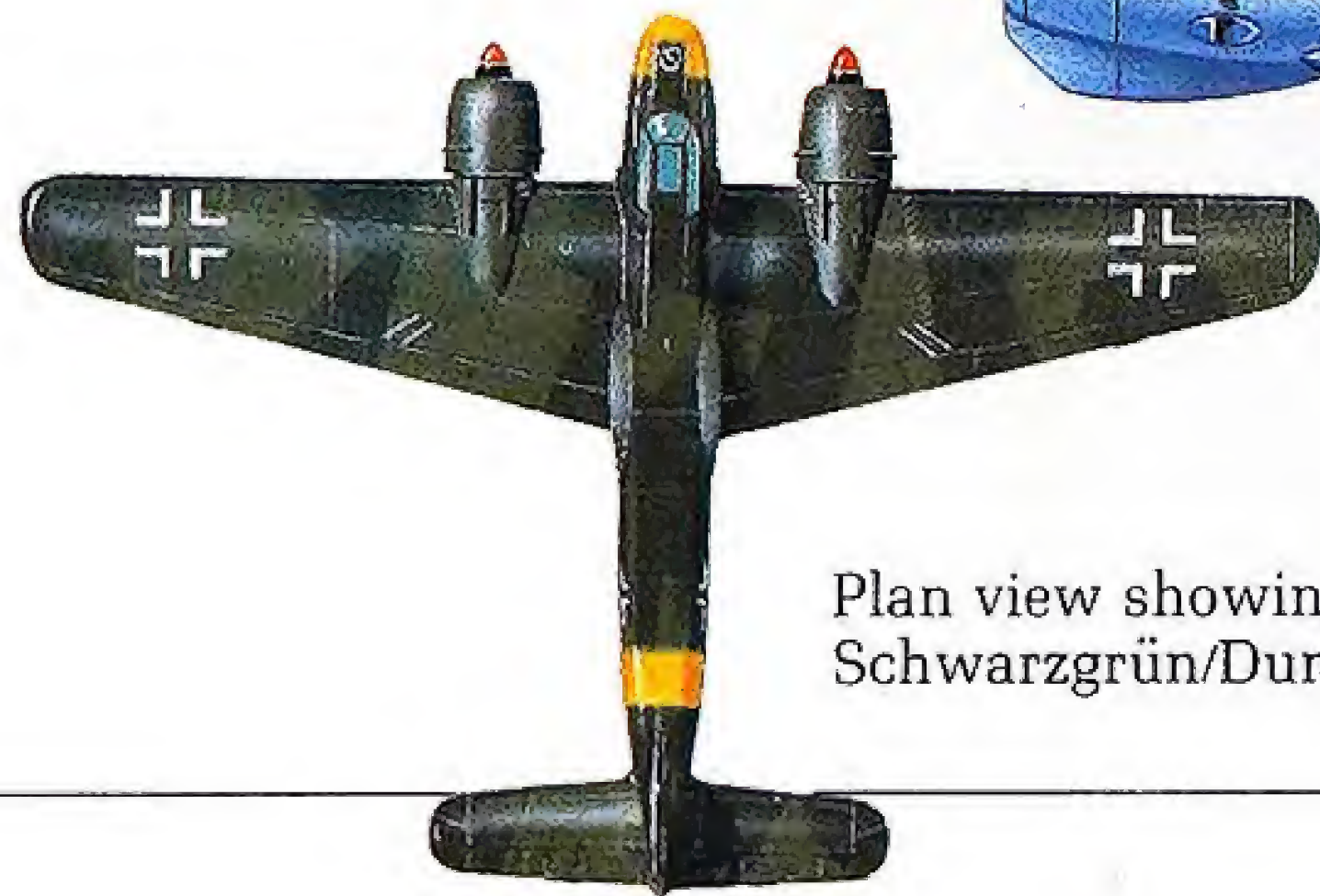
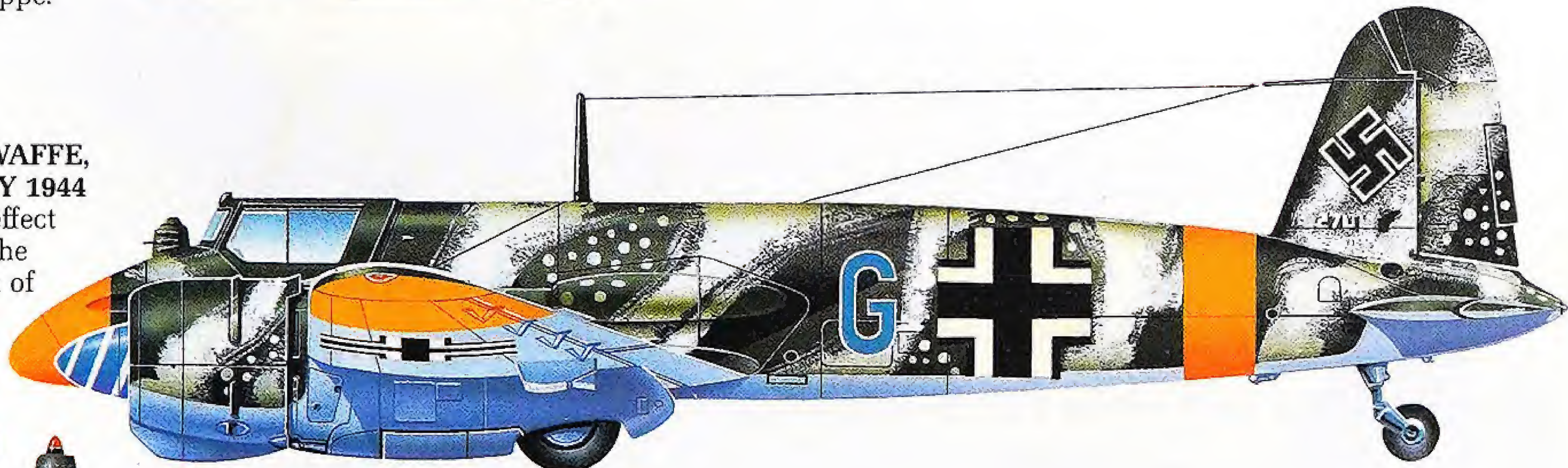
Hs 129B-1, 8./SCH.G.1, LUFTWAFFE, EASTERN FRONT, FEBRUARY 1943

Many Luftwaffe aircraft received a coat of white paint over the normal two-green finish during the harsh Russian winters. Intense operations usually found the original colors gleaming through as indicated here. The triangle aft of the fuselage cross indicated a II Gruppe machine; in front of the cross would have meant it was I Gruppe.



Hs 129B-2, IV(PZ)/SG 9, LUFTWAFFE, EASTERN FRONT, FEBRUARY 1944

An unusual snow camouflage effect applied over the green finish. The protrusion immediately in front of the cockpit is the Revi C12/C gun sight, which was offset slightly to starboard.



Plan view showing the standard Schwarzgrün/Dunkelgrün finish.

CURTISS HAWK

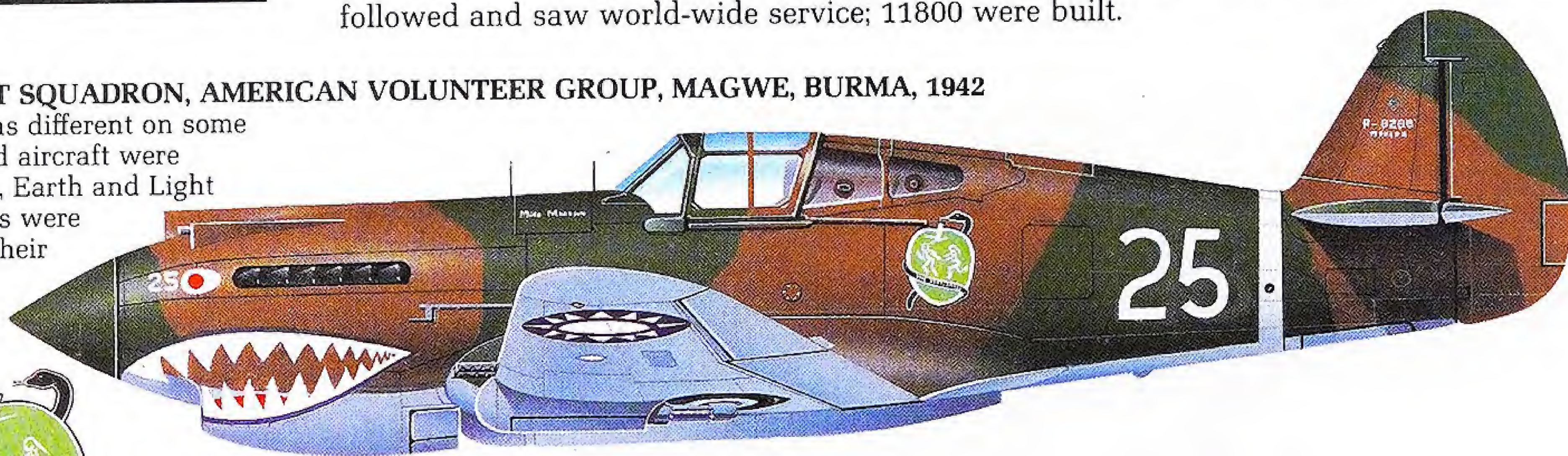
Replacing the air-cooled radial engine of the Hawk 75 with a liquid-cooled powerplant produced the Hawk 81 series of famous P-40s and RAF-operated Tomahawks. The lack of performance of this racy-looking fighter was made up for by ruggedness which saw many aircraft gaining their bases badly damaged but still flying. As well as 524 delivered to the USAAF, 1280 went to the RAF and another 100 were supplied to the American Volunteer Group in China during 1941. The improved Warhawk/Kittyhawk followed and saw world-wide service; 11800 were built.

HAWK 81A-3, 1st PURSUIT SQUADRON, AMERICAN VOLUNTEER GROUP, MAGWE, BURMA, 1942

Although the patterning was different on some aircraft, most AVG-operated aircraft were finished in this Dark Green, Earth and Light Blue camouflage. Squadrons were designated by the color of their fuselage band (see below).



Badge of the 1st Pursuit Sqn.

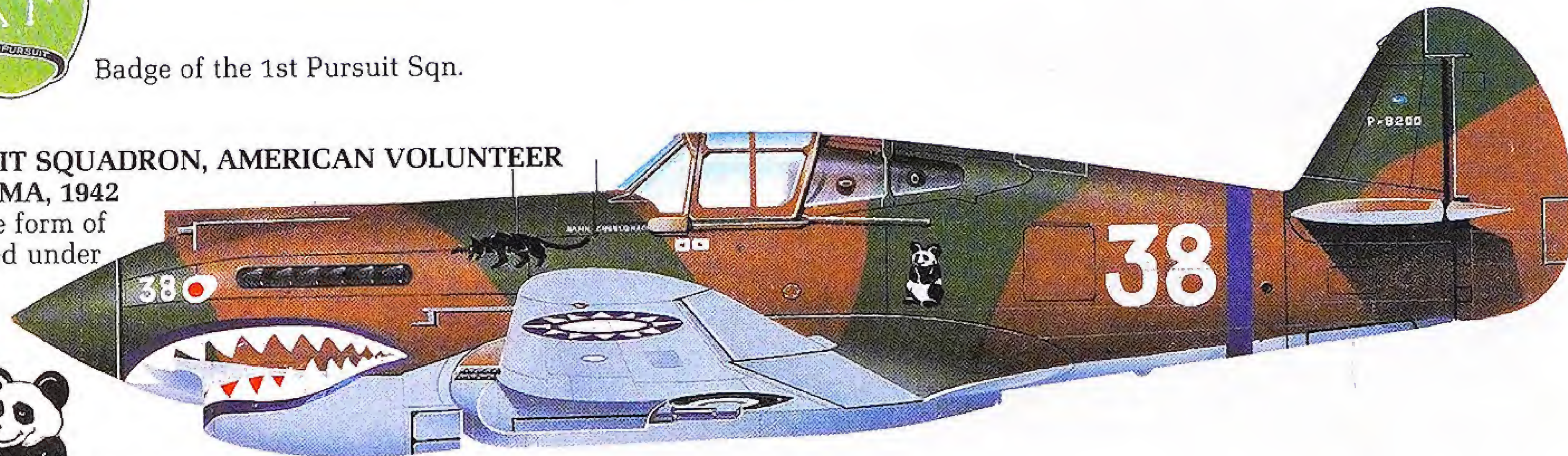


HAWK 81A-3, 2nd PURSUIT SQUADRON, AMERICAN VOLUNTEER GROUP, TOUNGOO, BURMA, 1942

Two victories appear in the form of small Japanese flags painted under the cockpit on this aircraft flown by Henry Geselbracht. In only nine months existence, the AVG shot down 286 Japanese aircraft, incurring only four combat losses.



Panda Bear emblem painted on Geselbracht's aircraft.



HAWK 81A-2, 3rd PURSUIT SQUADRON, AVG, KUNMING, CHINA, SPRING 1942

Popularly called "The Flying Tigers", the AVG P-40s carried Chinese Air Force insignia on the wings and sported sharks teeth around the engine intake. This is Charles Older's aircraft which has 10 victory flags, the "Hell's Angel" marking and the Flying Tiger emblem on the side.



"Hell's Angel", which appeared in many different forms on the AVG aircraft.



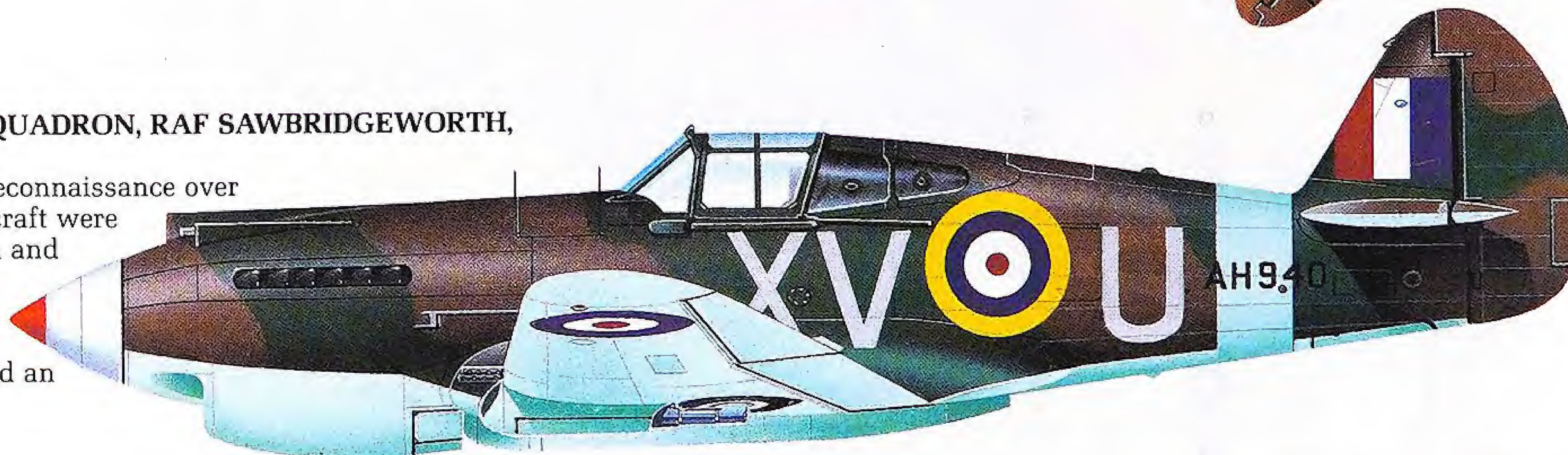
Flying Tiger insignia.



Plan view camouflage scheme of Older's P-40.

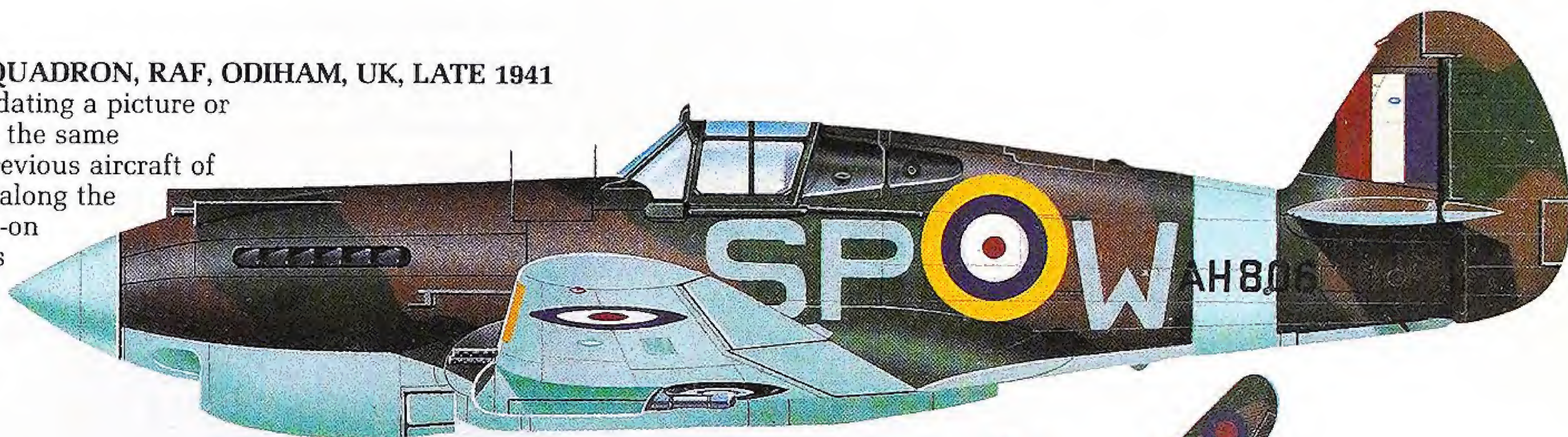
TOMAHAWK Mk IIA, 2 SQUADRON, RAF SAWBRIDGEWORTH, UK, LATE 1941

Used for low-level fighter-reconnaissance over occupied Europe, these aircraft were camouflaged in Dark Green and Dark Earth with Sky undersides. Codes were in Medium Sea Gray. The red-tipped spinner indicated an A Flight aircraft.



TOMAHAWK Mk I, 400 SQUADRON, RAF, ODIHAM, UK, LATE 1941

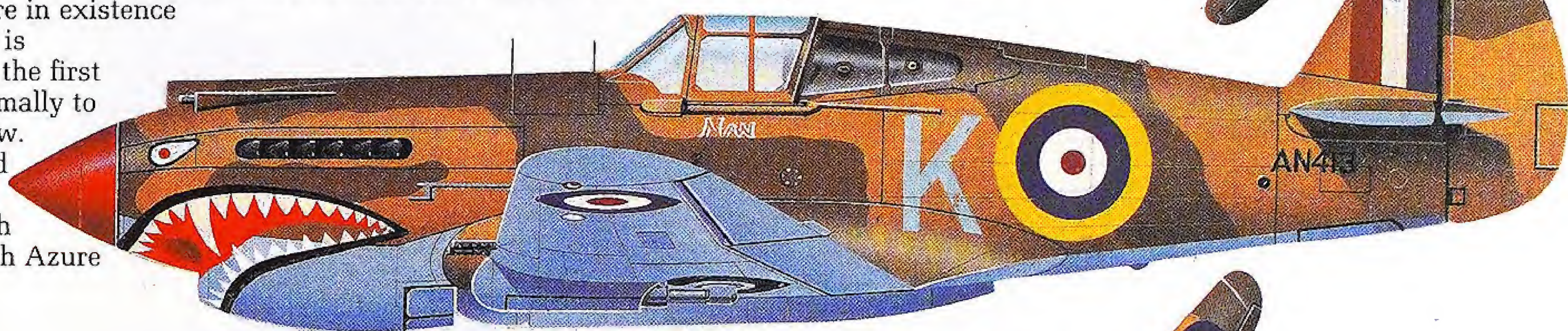
Markings can be a help in dating a picture or drawing. This example has the same camouflage colors as the previous aircraft of 2 Sqn, but the yellow strip along the wing leading edge for head-on identification purposes was not ordered until 30 October 1941; within a few days of this date all aircraft had been painted.



Typical upper-surface camouflage pattern for Tomahawks of the 1941 period.

TOMAHAWK Mk IIB, 112 SQUADRON, RAF SIDI HANEISH, NORTH AFRICA, LATE 1941

Shark-mouth markings were in existence before World War II, but it is believed that this unit was the first Allied fighter squadron formally to adopt this eye-catching maw. The AVG in China followed shortly afterwards. This example has the Dark Earth and Mid-Stone coloring with Azure Blue undersides.



Plan view of the North Africa based aircraft.

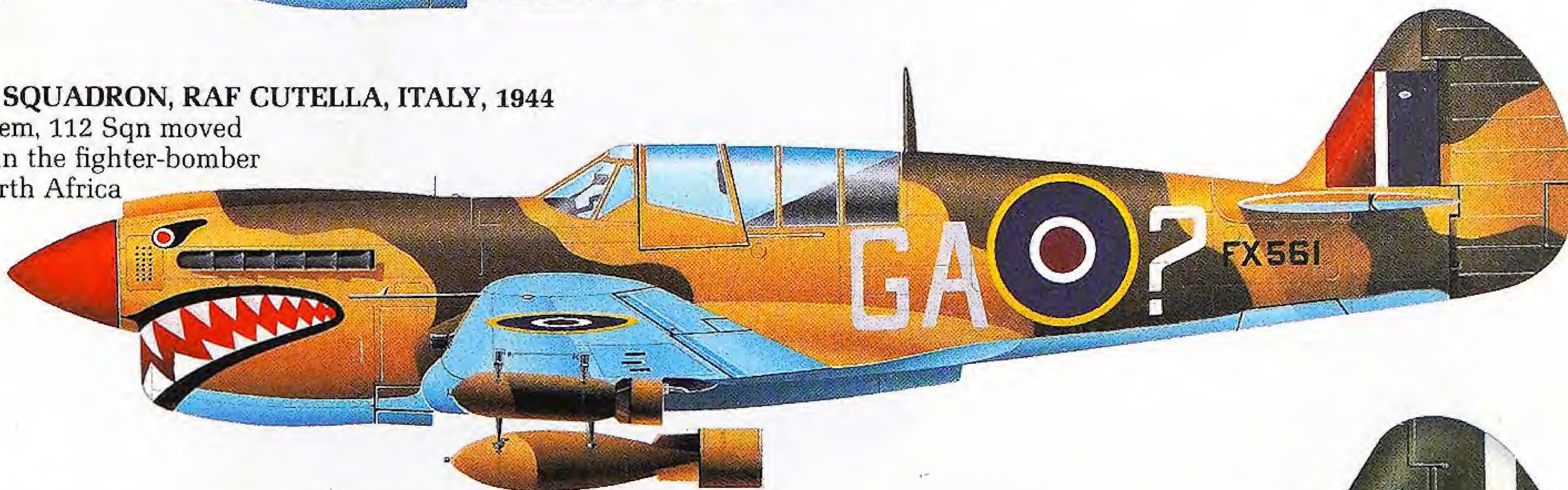
KITTYHAWK Mk I, 112 SQUADRON, RAF LG 91, NORTH AFRICA, LATE 1942

Flg Off Neville Duke's aircraft with white codes and early style roundel. Duke became the top-scoring Allied pilot in the Mediterranean theater and after the war joined Hawker Aircraft as Chief Test Pilot.



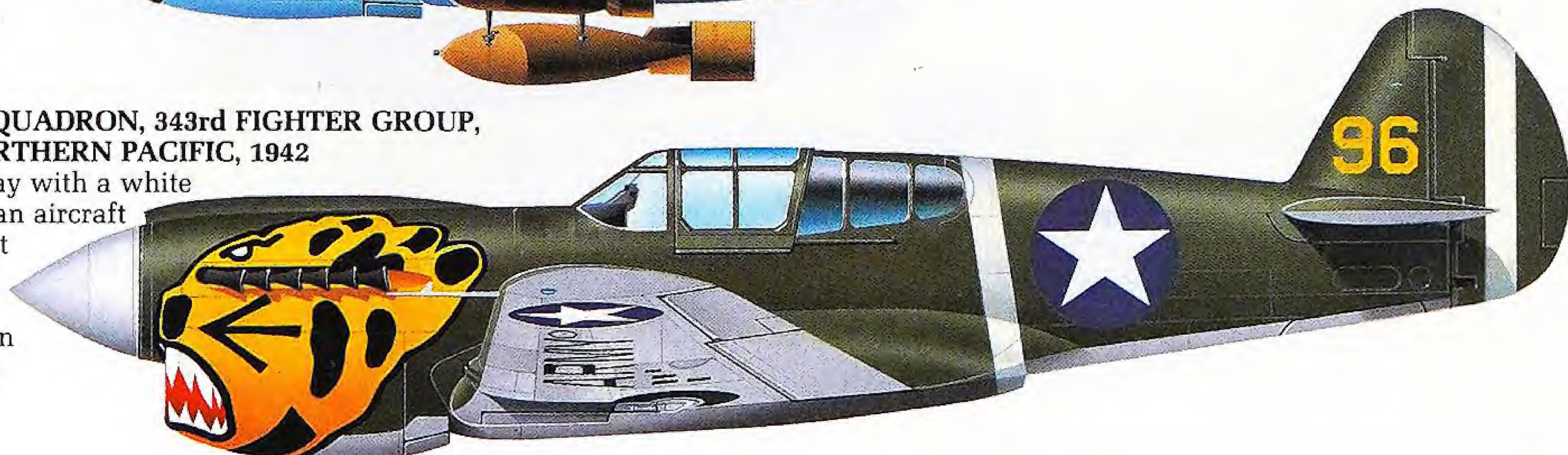
KITTYHAWK Mk IV, 112 SQUADRON, RAF CUTELLA, ITALY, 1944

With the desert behind them, 112 Sqn moved up Italy using its aircraft in the fighter-bomber role. Most retained the North Africa finish, but incorporated later-style roundels and fin flash. Note that the shark's mouth marking differed between aircraft.



P-40E WARHAWK, 11th SQUADRON, 343rd FIGHTER GROUP, USAAF, ALEUTIANS, NORTHERN PACIFIC, 1942

Olive Drab and Neutral Gray with a white spinner and unit stripe on an aircraft operating in one of the most inhospitable areas of the world. The nose marking was known as the "Aleutian Tiger" as a tribute to Claire Chennault of AVG fame.

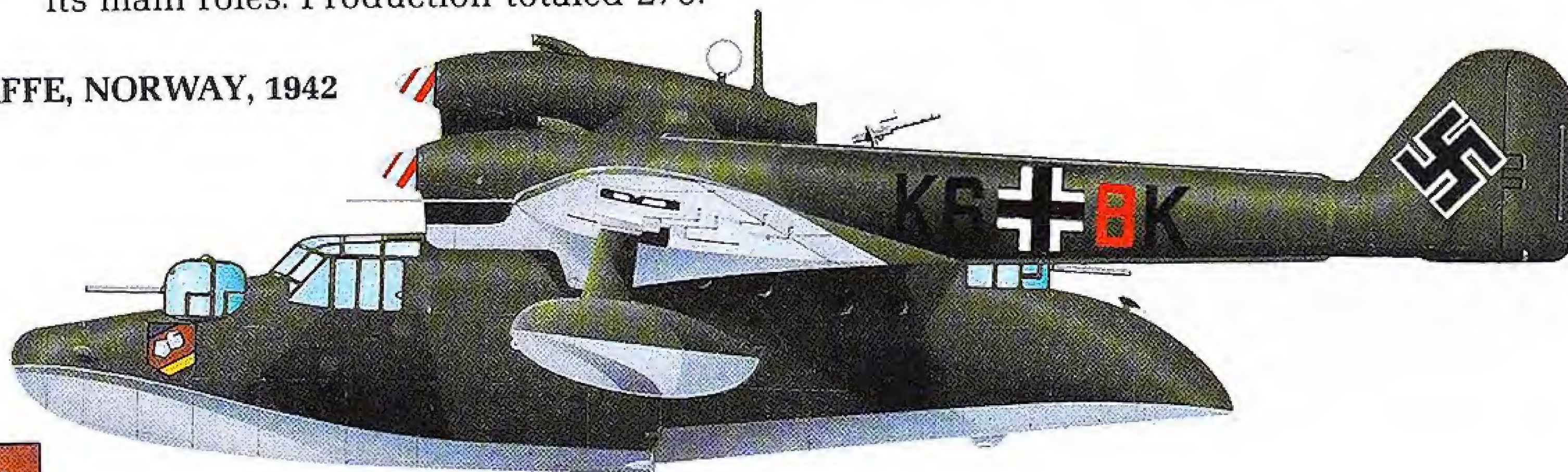


Bv 138

Nicknamed by Luftwaffe personnel *Der Fliegende Holzschuh* (The Flying Clog) owing to the shape of its central hull, the unconventional 3-engined Bv 138 turned out to be a remarkably efficient flying-boat. Flown in prototype form in July 1937, production examples first saw service during the invasion of Norway in 1940. Following problems with the Bv 138A and B series, the C version appeared in 1941 and became the major production type. Reconnaissance, SAR, minesweeping and anti-shiping duties were its main roles. Production totaled 279.

C-1, 2./KÜSTENFLIEGERGRUPPEN 406, LUFTWAFFE, NORWAY, 1942

The standard finish on flying-boats reflected the general Luftwaffe color scheme, that of Dunkelgrün (dark green), Schwartzgrün (black-green) with Hellblau (clear blue) undersides. This example was employed against the Arctic Convoy PQ 13 taking war supplies to the Soviet Union.

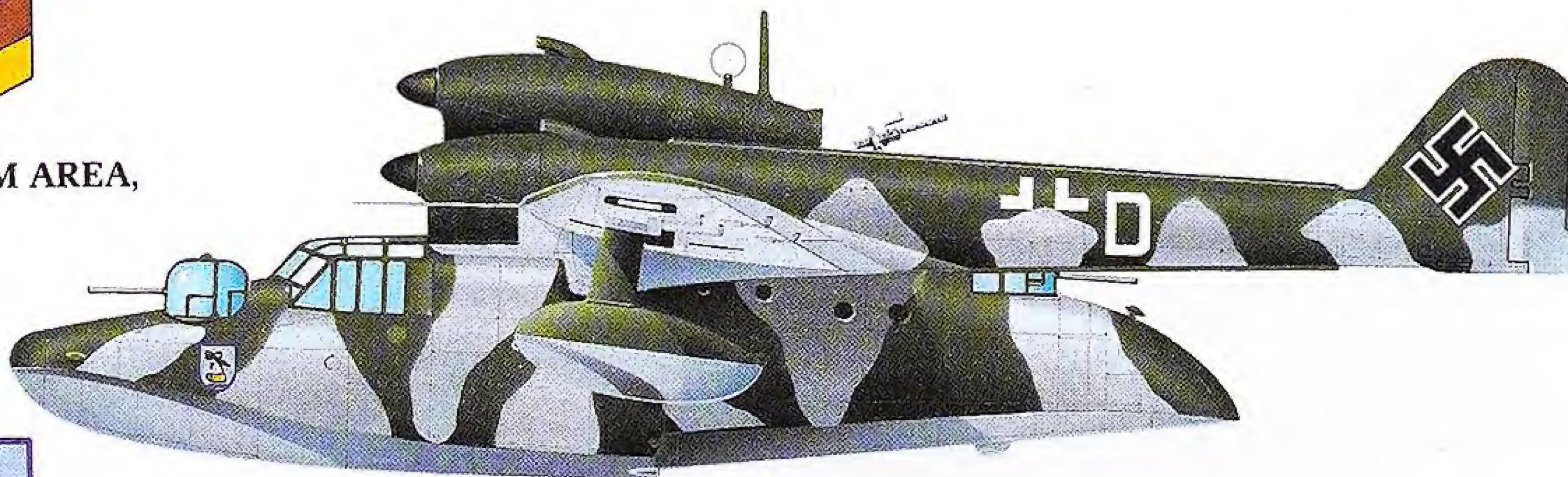


Emblem of 2./Kü.Fl.Gr.406. This Iron Hand marking was previously used on the unit's Do 18s prior to re-equipment with Bv 138s.



C-1/U1, 1.(F)/SAGr 130, LUFTWAFFE, TRONDHEIM AREA, NORWAY, APRIL 1944

During operations in the Arctic Ocean aircraft were often given a random application of white paint to enable them to merge better with the ice floes on reconnaissance missions. The aircraft were refuelled from U-boats to extend their range.

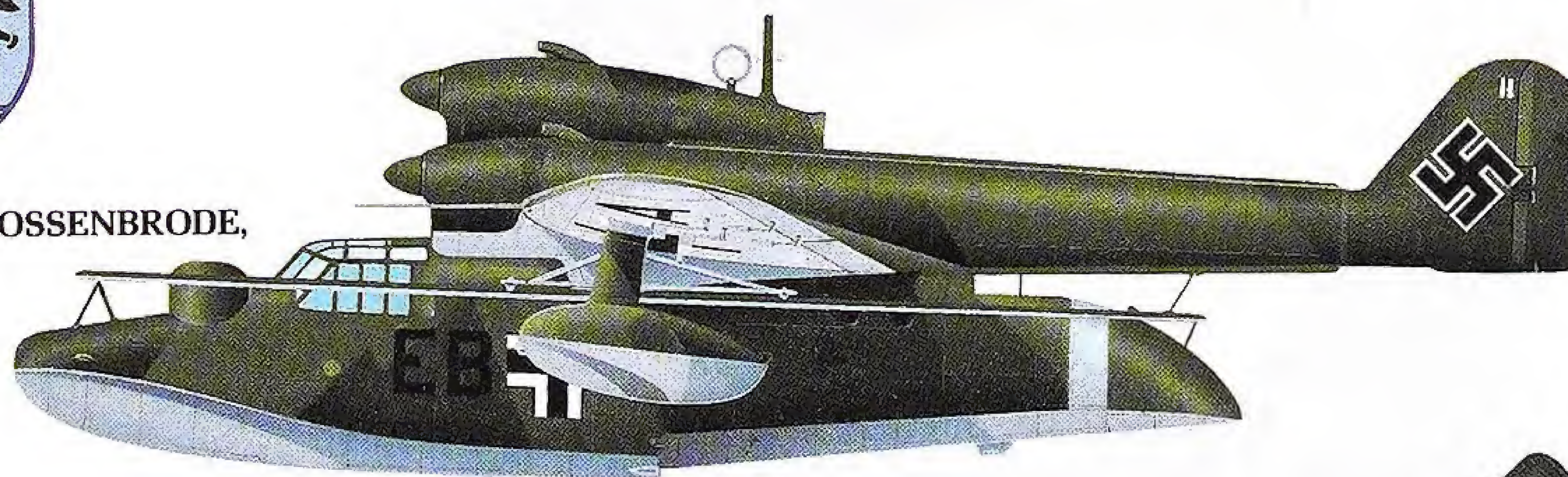


"Telescope-equipped Penguin" badge of 1.(F)/SAGr 130.

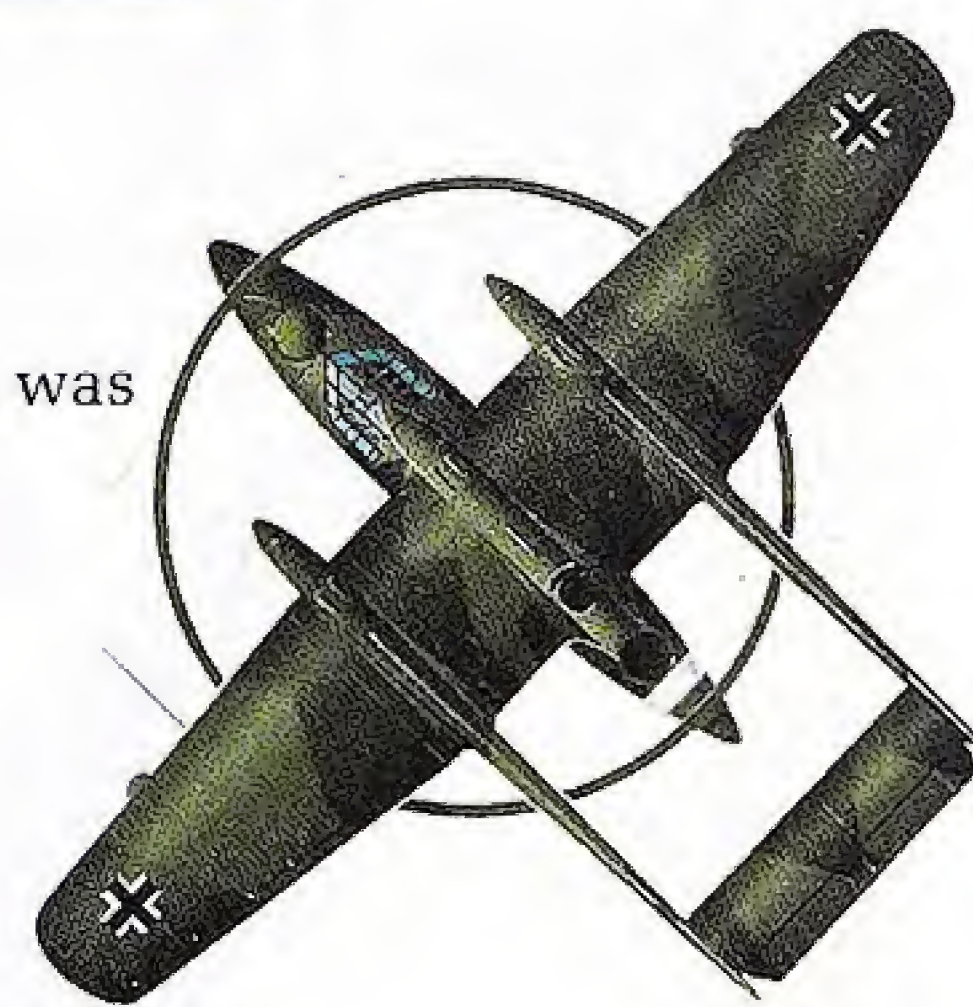


MS (MINENSUCHE), 6./MSGr.1, LUFTWAFFE, GROSSENBRÖDE, BALTIC SEA, 1944-5

Dubbed the Mouse-catching aircraft owing to the circular de-gaussing ring for mine sweeping, these modified machines had the auxiliary motor for energizing the ring mounted in place of the front turret.

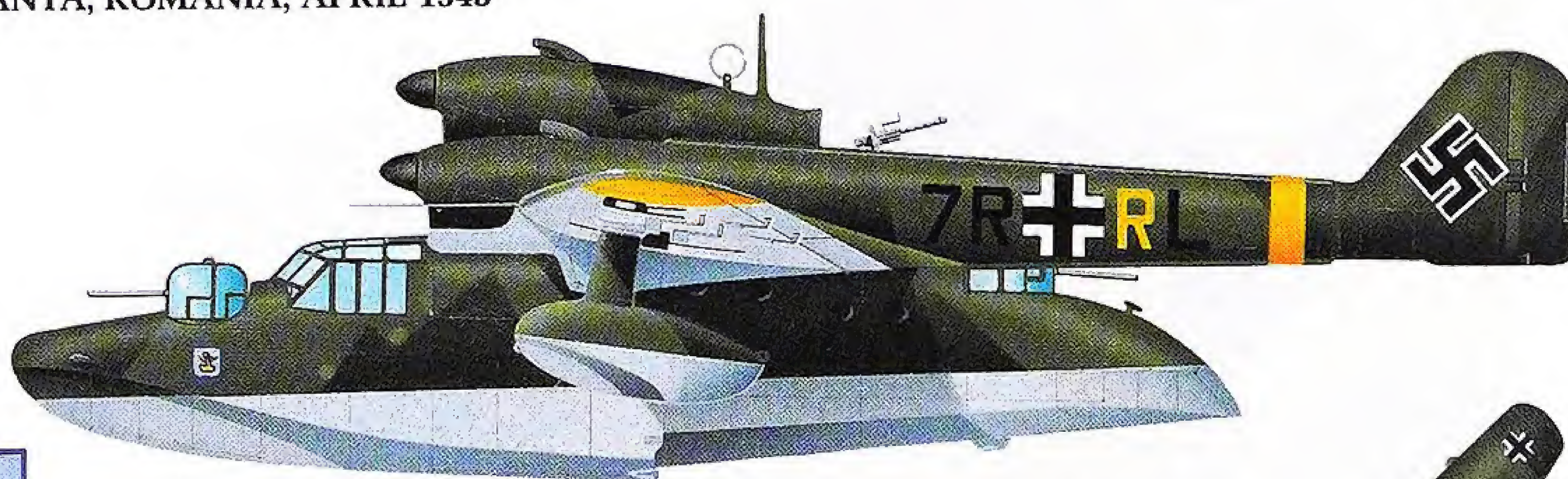


Plan view of the Bv 138 MS. Armament was removed from this version.



C-1, 3./SAGr 125, LUFTWAFFE, MAMAIA/CONSTANTA, ROMANIA, APRIL 1943

The yellow theater colors indicate an Eastern Front aircraft. The front and rear turrets contained a single 20mm cannon, and the position behind the center engine had one 13mm MG. Unusually, the center Jumo engine on the C series drove a four-bladed propeller, the other two engines powering three-bladed props.



Bomb-carrying Penguin emblem of 3./SAGr 125 – an allusion to the type's ability to carry weapons under the wing center-section.



Plan view showing the upper-surface camouflage pattern applied to the 3./SAGr 125 aircraft.

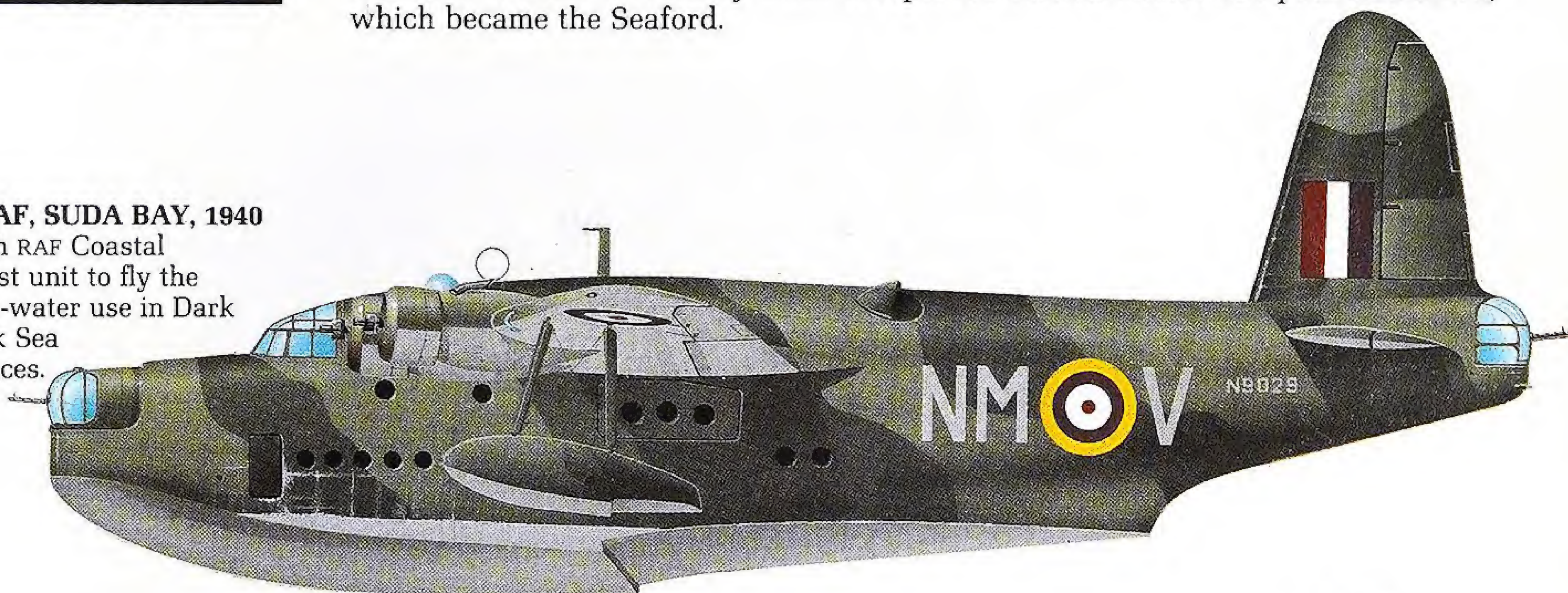


SHORT SUNDERLAND

Dubbed by the Germans who fought it, the "Flying Porcupine", the Sunderland long-range flying boat bristled with defensive armament and at one time carried up to 12 MGs in addition to bombs and depth charges. It entered service with RAF Coastal Command in 1938 and finally retired in 1960 when the last French-operated example was withdrawn. Mks I, II and III were powered by Bristol Pegasus engines; the Mk V switched to Pratt & Whitney Twin Wasps. Production totaled 721 plus 31 Mk IVs, which became the Seaford.

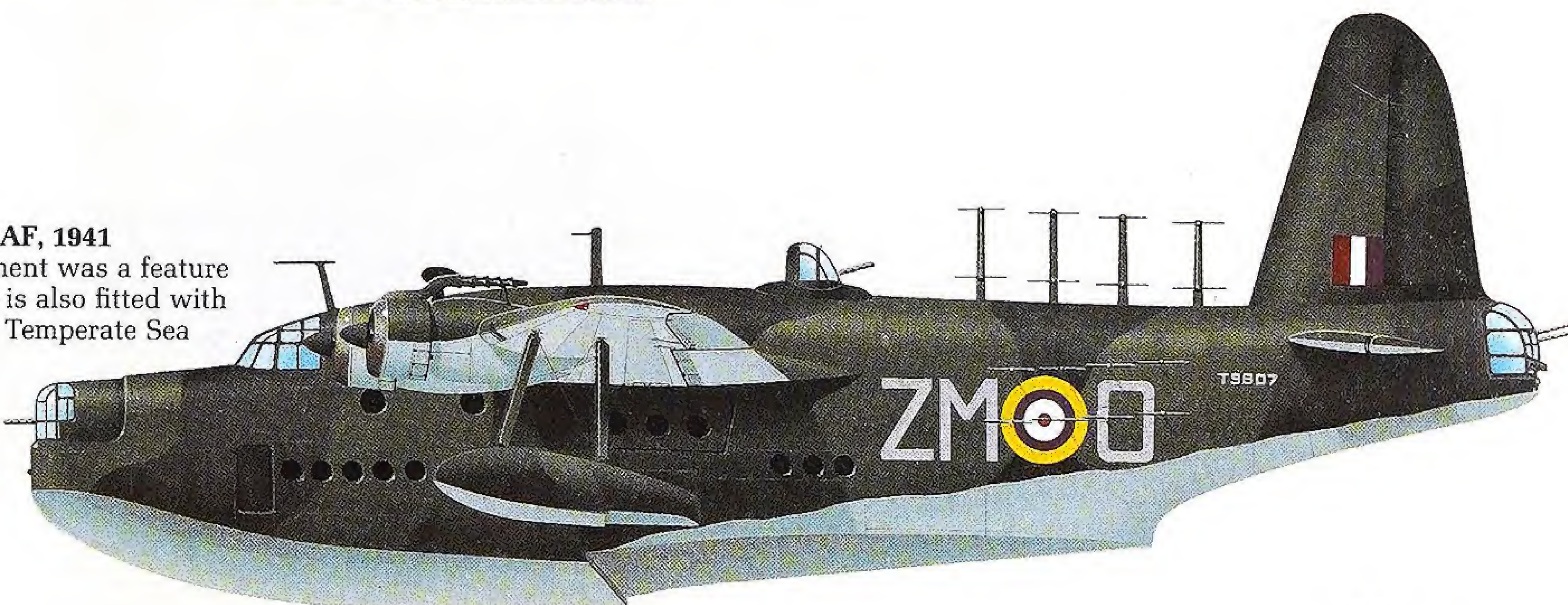
Mk I, 230 SQUADRON, RAF, SUDA BAY, 1940

This aircraft operated with RAF Coastal Command and was the first unit to fly the type, camouflaged for over-water use in Dark Slate Gray and Extra Dark Sea Gray with Sky undersurfaces. The serial and codes are in light gray.



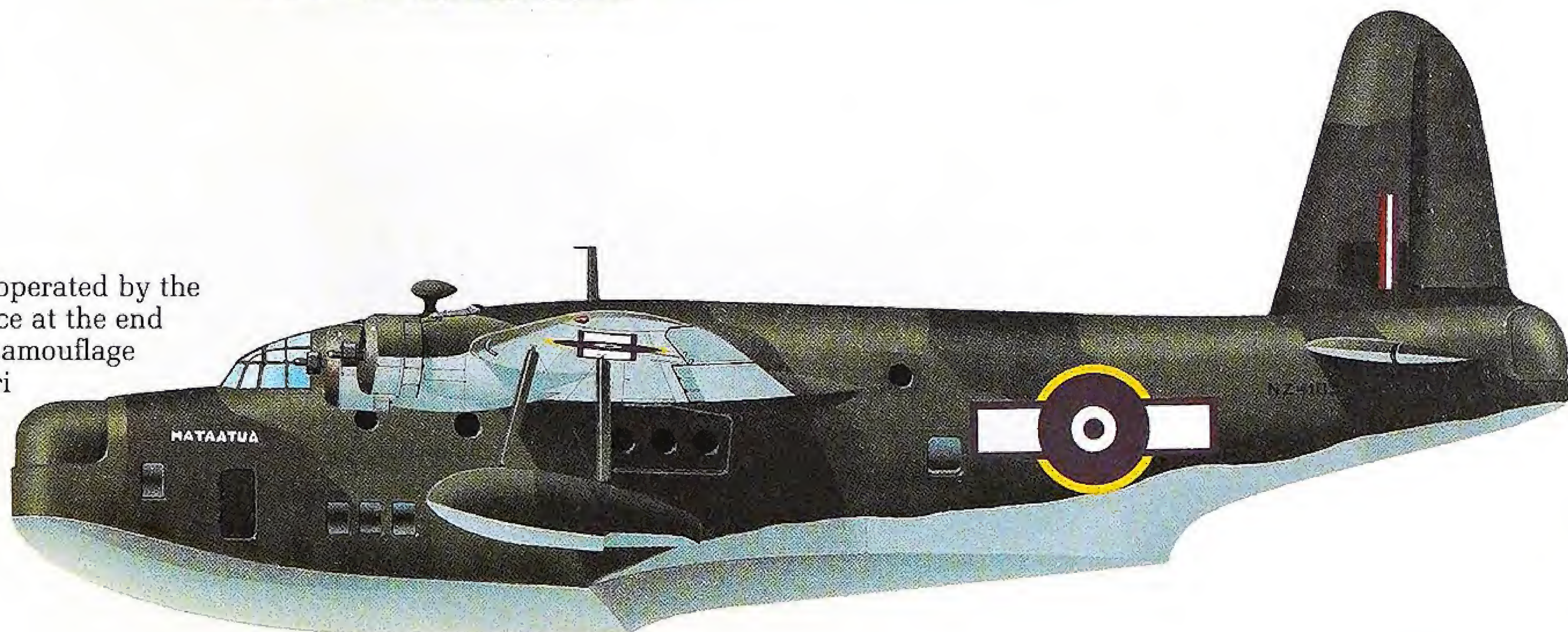
Mk II, 201 SQUADRON, RAF, 1941

Improved defensive armament was a feature of the Mk II. This example is also fitted with ASV radar. The scheme is Temperate Sea with a modified pattern compared with NM - V shown above.



Mk III, RNZAF, 1945

Four Sunderland III's were operated by the Royal New Zealand Air Force at the end of 1944. They retained RAF camouflage and received names of Maori canoes usually painted on the nose. Bars were added to the RAF roundels to conform with US insignia



Mk IV, 35 SQUADRON, SOUTH AFRICAN AIR FORCE, 1945

Based at Durban in South Africa, which received its first Sunderlands in 1945, this aircraft retains its late-war white finish on its undersurfaces and sides. The top was painted Dark Green.

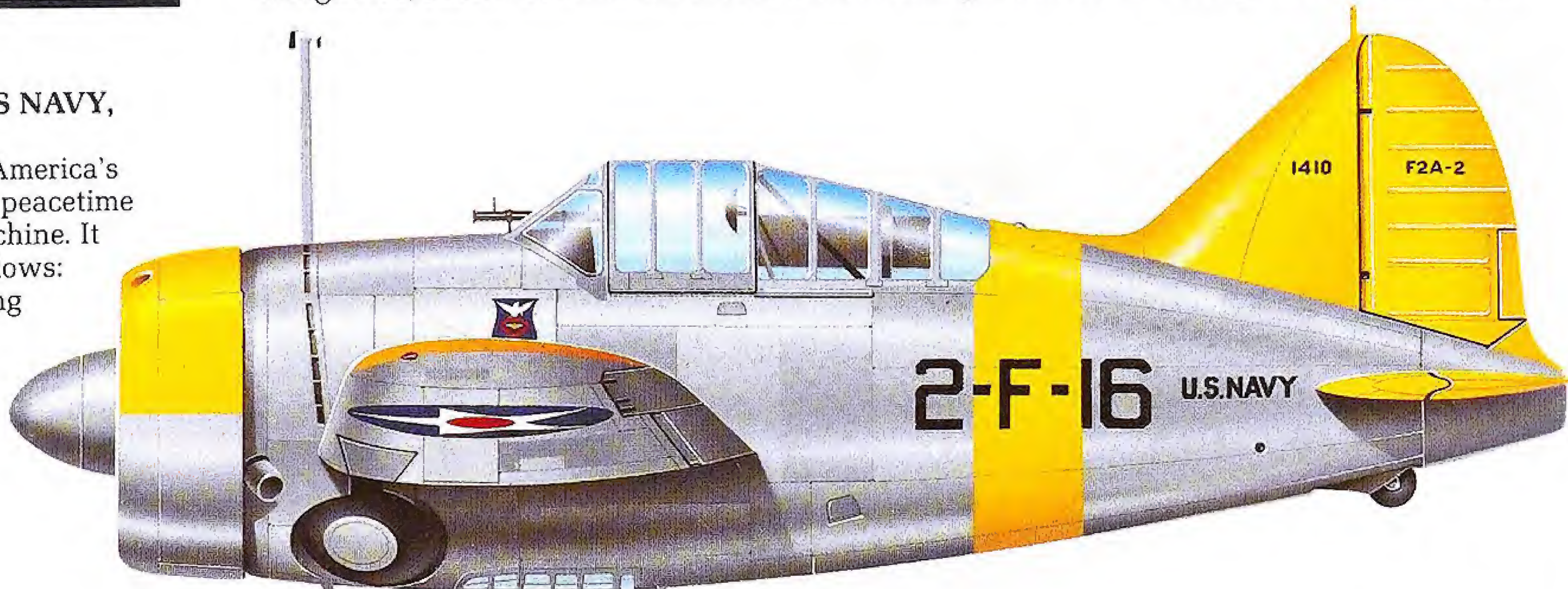


BREWSTER BUFFALO

The Buffalo had been overtaken by the technical advances in fighter development even before it went to war. Flown in prototype form in December 1937, this tubby design was the US Navy's first shipboard fighter monoplane and although markedly superior in performance to the biplane fighters it was replacing, it proved no match for the Japanese Zeros at Midway or during the battle for Singapore in 1942. Finland bought 44, made allowances for its shortcomings, and successfully flew it until 1948.

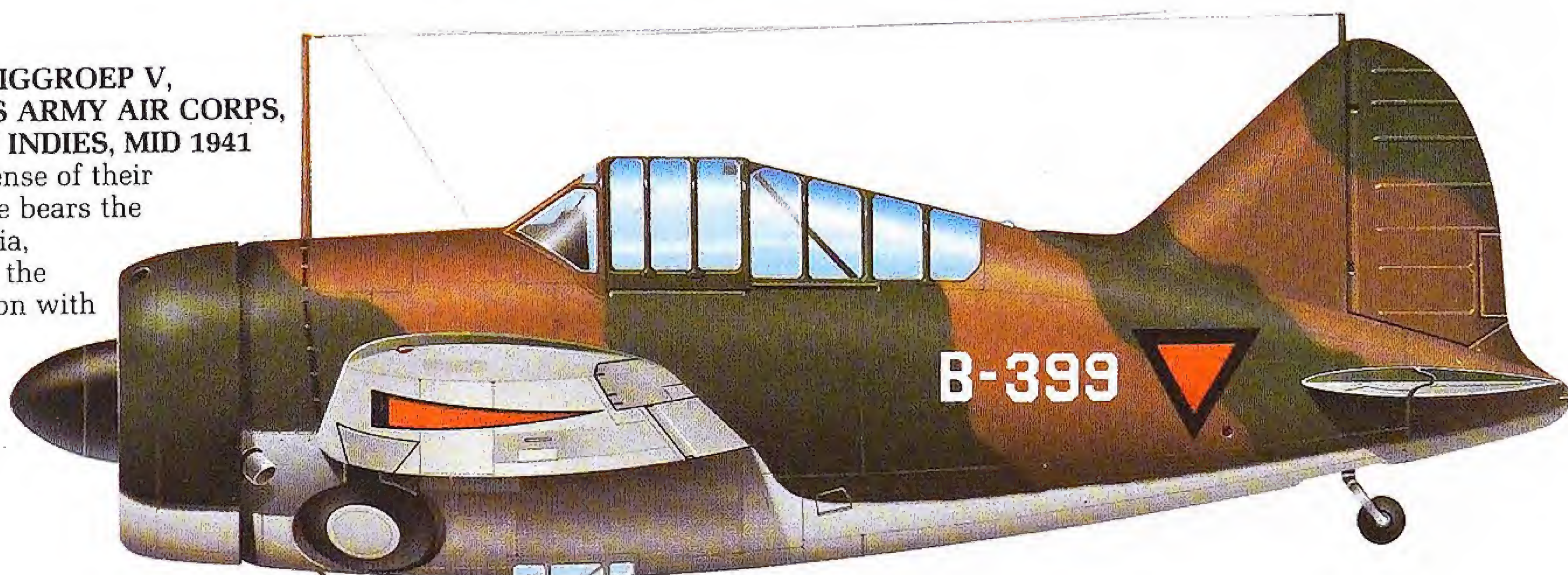
F2A-2, VF-2 "FLYING CHIEFS", US NAVY, USS LEXINGTON, MARCH 1941

While Europe was fighting it out, America's armed forces still maintained their peacetime appearances, as shown by this machine. It was painted with two different yellows: glossy chrome above the upper wing surfaces and lemon yellow on the cowl, fuselage and tail unit – the latter denoting *Lexington*.



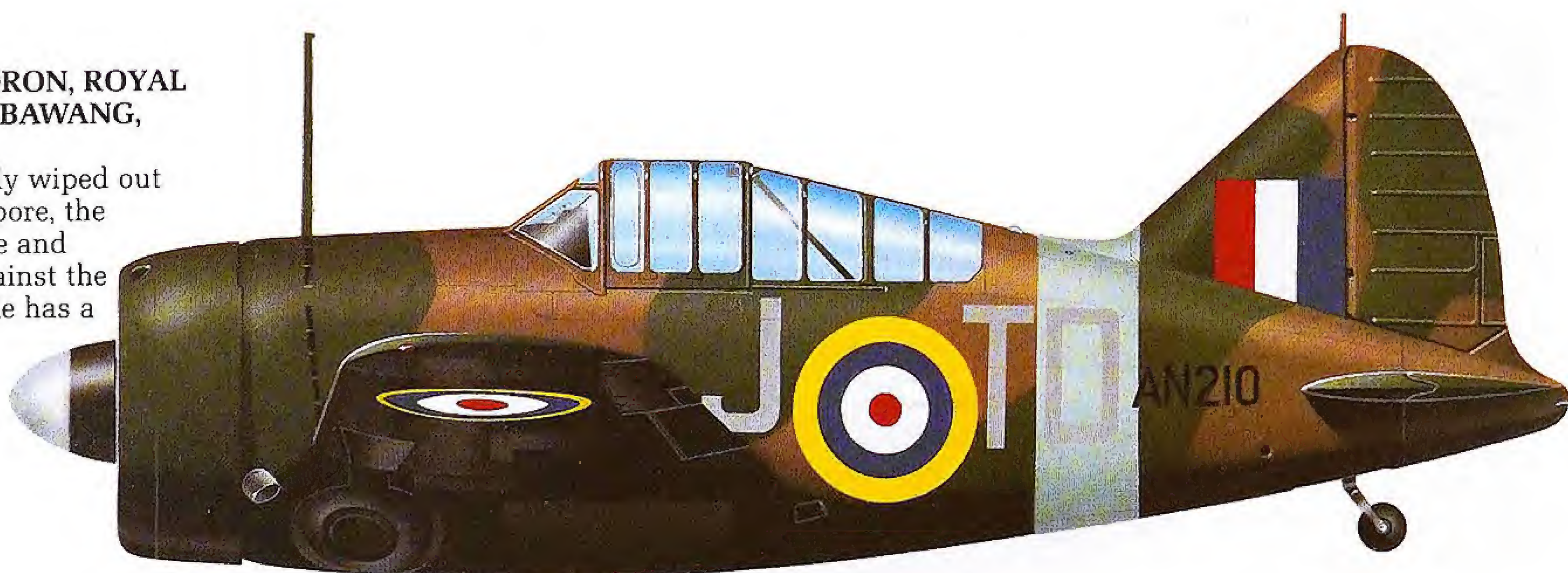
B-339D, 1 AFDELING, VLIEGTUIGGROEP V, ROYAL NETHERLANDS INDIES ARMY AIR CORPS, SEMPLAK, JAVA, DUTCH EAST INDIES, MID 1941

The Dutch bought 72 for the defense of their East Indies colonies; this machine bears the immediate pre-war orange insignia, which would be discarded when the Japanese struck to avoid confusion with the red *Hinomaru* marking.



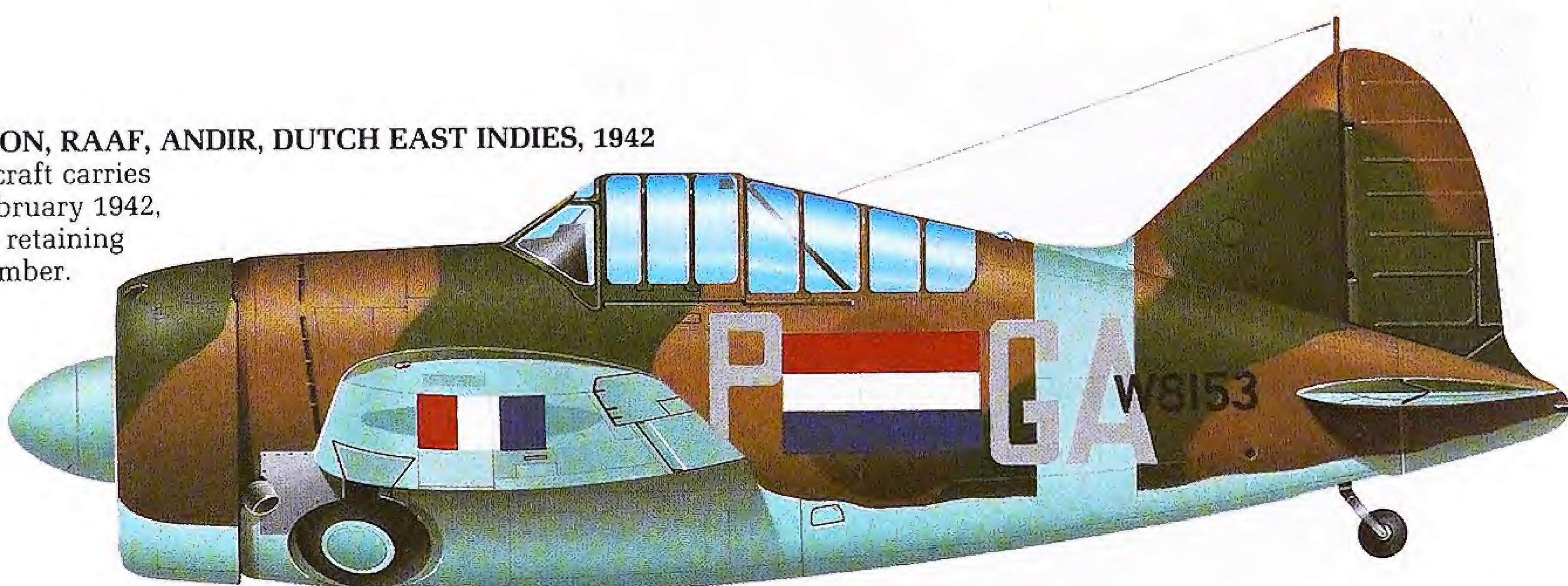
BUFFALO I (AN210), 453 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, SEMBAWANG, SINGAPORE, NOVEMBER 1941

Two months of operations virtually wiped out Allied fighter opposition in Singapore, the Buffalos putting up stiff resistance and claiming a number of victories against the Japanese. While this RAAF example has a matt black underside, most RAF-operated aircraft retained the Sky color.



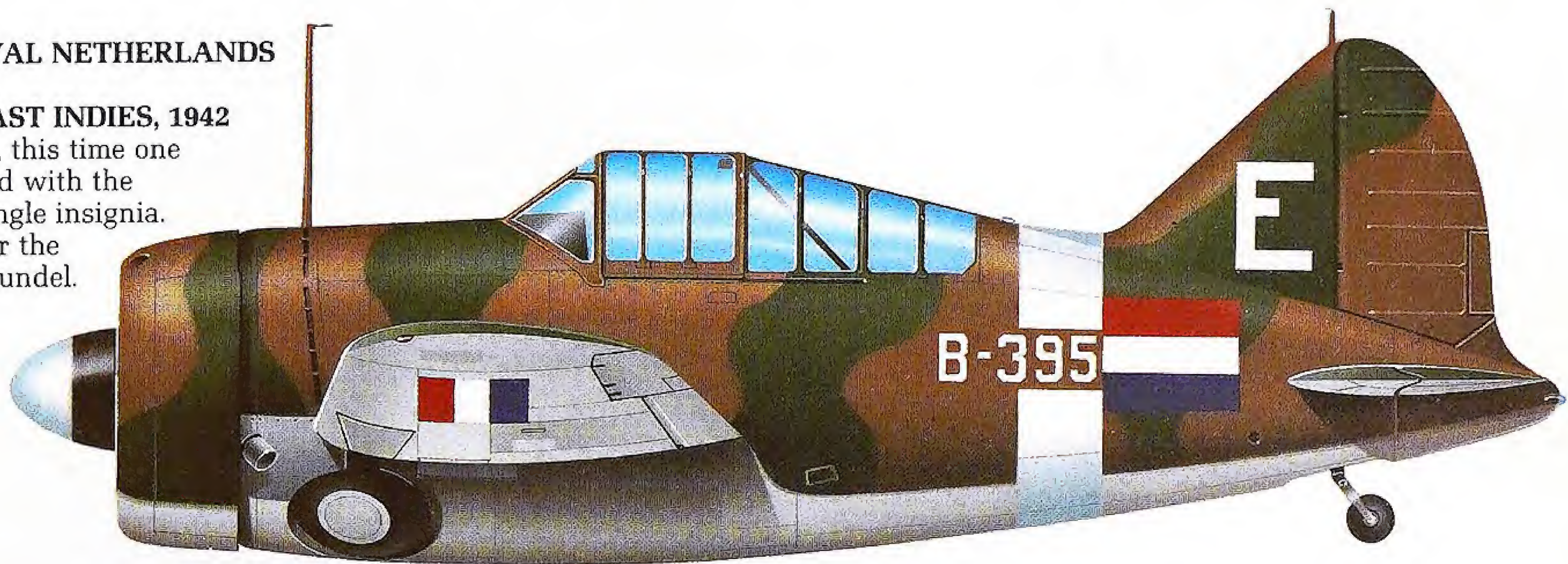
BUFFALO I (W8153), 21 SQUADRON, RAAF, ANDIR, DUTCH EAST INDIES, 1942

Captured by the Japanese, this aircraft carries the Dutch markings adopted in February 1942, painted over the RAF roundels, but retaining the gray codes and black serial number.



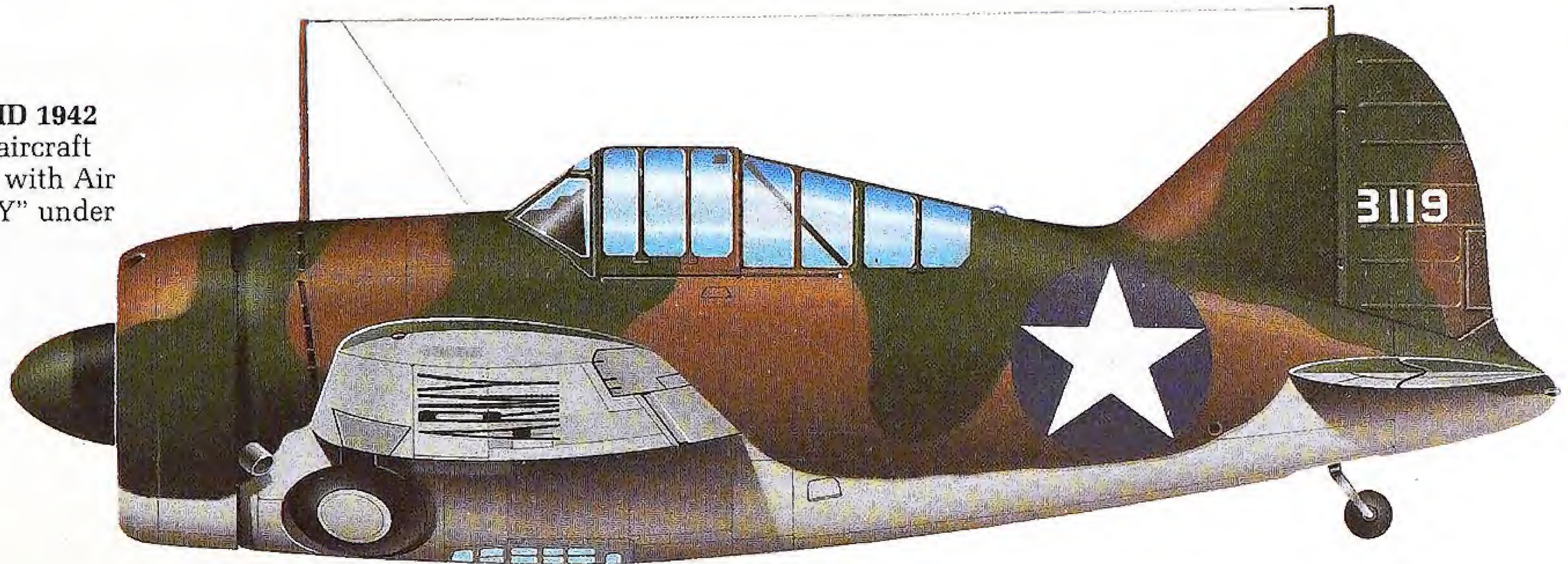
**B-339D, COMBINED UNIT, ROYAL NETHERLANDS
INDIES ARMY AIR FORCE,
ANDIR, BANDUNG, DUTCH EAST INDIES, 1942**

Another Dutch-operated aircraft, this time one of their own machines, re-marked with the national flag colors over the triangle insignia. The marking changed again after the war to the present segmented roundel.



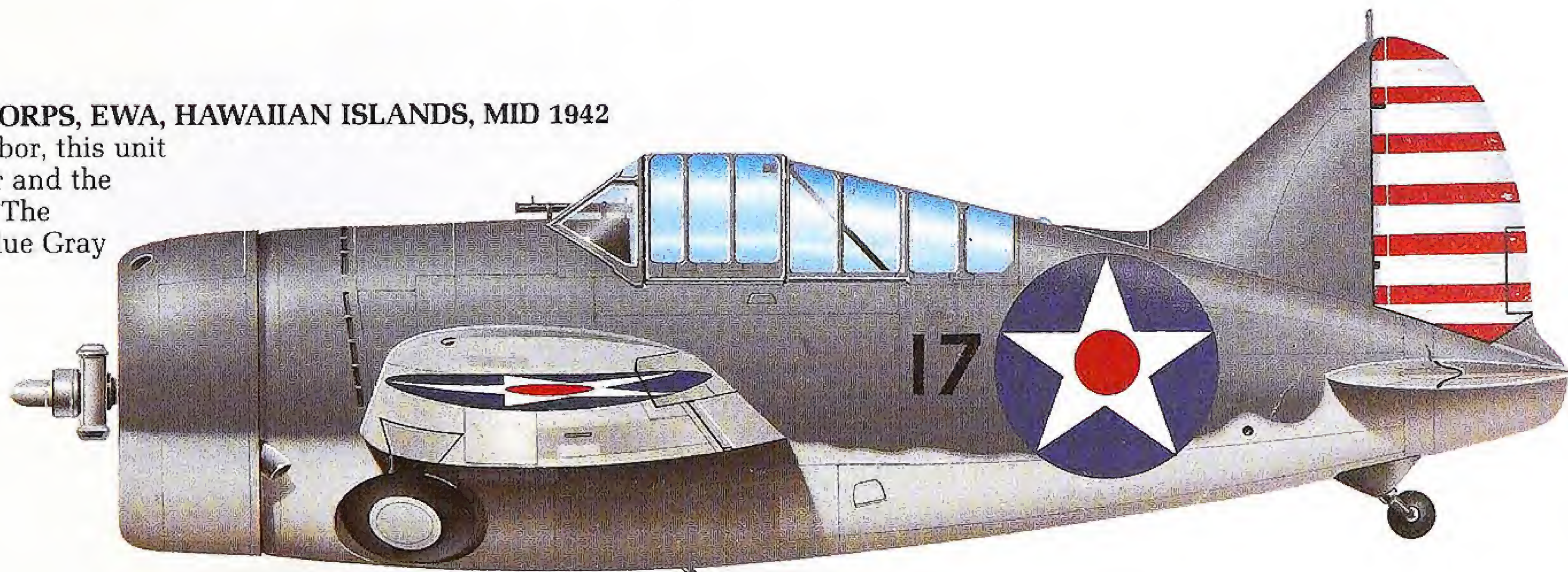
B-439, USAAF, AUSTRALIA, MID 1942

Briefly flown by the USAAF, this aircraft appears to have RAF camouflage with Air Force markings. Note the "ARMY" under the port wing.



F2A-3, VMF-221, US MARINE CORPS, EWA, HAWAIIAN ISLANDS, MID 1942

Part of the defenses of Pearl Harbor, this unit removed the red circle in the star and the rudder striping on 15 May 1942. The camouflage was Non-Specular Blue Gray and Light Gray.



**B-239, NO 2 FLIGHT, 24 SQUADRON,
FINNISH AIR FORCE, TIKSJARVI,
FINLAND, SEPTEMBER 1942**

Sgt H. Lampi's aircraft (BW-354) during the Continuation War, when Finland fought with the Germans against the Soviet Union. Heimo Lampi scored 14 victories, marking them on the tail. Also on the tail is the Elk emblem of the flight; on the fuselage is the squadron Lynx insignia.

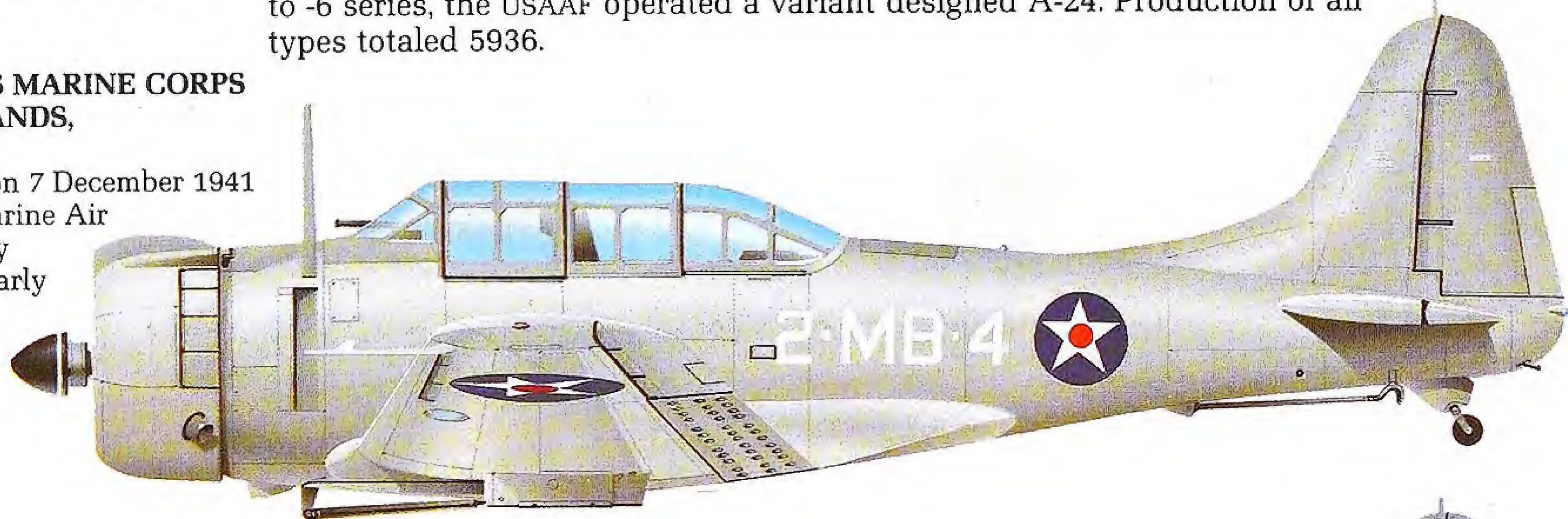


DOUGLAS DAUNTLESS

Developed in the mid 1930s as a carrier-based dive-bomber for the US Navy, the Dauntless was relatively slow and technically outmoded when it began its combat career in 1942. However, it was a rugged dependable aircraft and by the time it gave way to the Helldiver it had gained the distinction of sinking more Japanese shipping than any other Allied aircraft. The first prototype, known as the XBT-1, flew in July 1935 and production SBD-1s began reaching units in mid 1940. As well as the SBD-1 to -6 series, the USAAF operated a variant designed A-24. Production of all types totaled 5936.

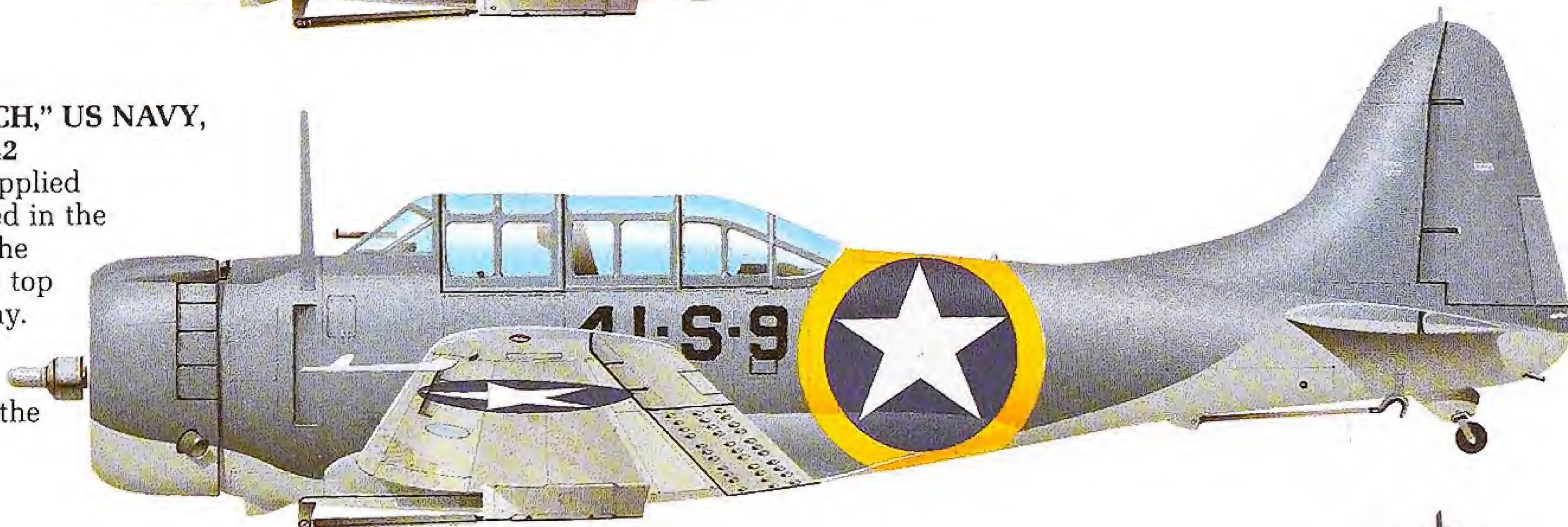
SBD-1, VMSB-232 (EX-VMB-2), US MARINE CORPS AIR GROUP 21, HAWAIIAN ISLANDS, DECEMBER 1941

When the Japanese struck Oahu on 7 December 1941 they caught the Dauntlesses of Marine Air Group 21 on the ground and badly battered them. At the time these early SBD-1s were finished in the Non-Specular Light Gray as directed by a 30 December 1940 order.



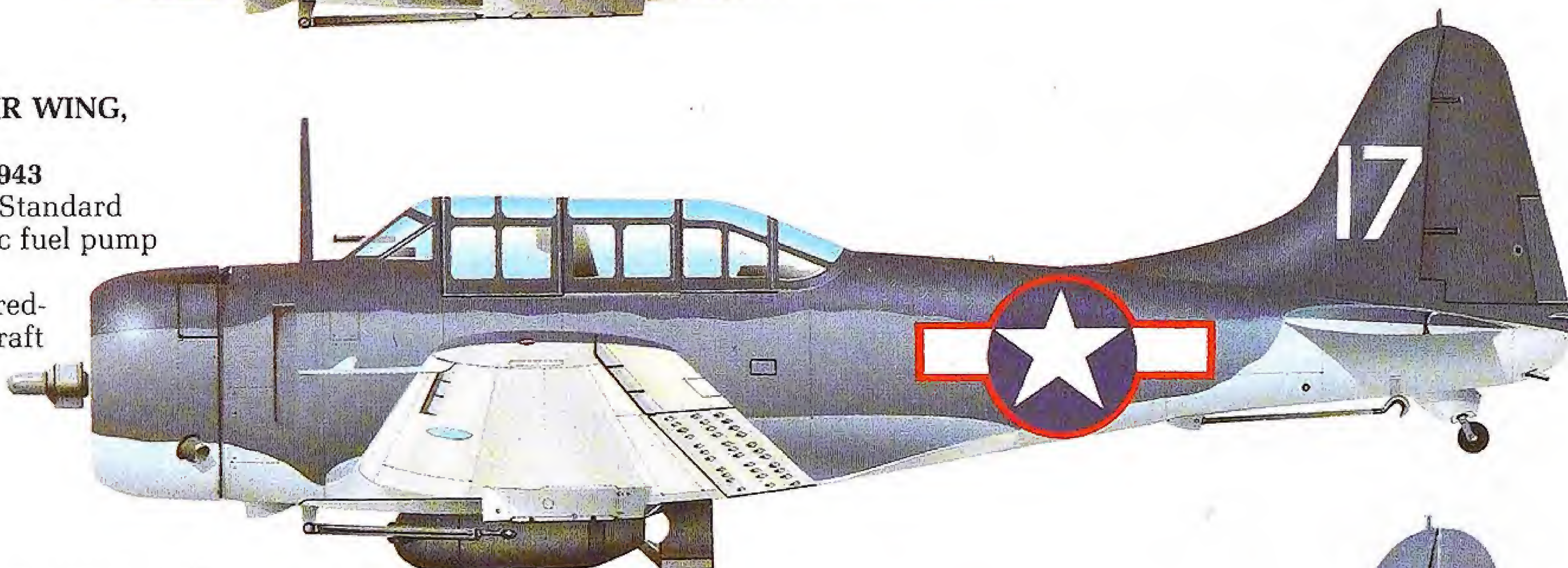
SBD-3, VS-41, OPERATION "TORCH," US NAVY, USS "RANGER", NOVEMBER 1942

A specially enlarged and crudely applied national insignia on an aircraft used in the invasion of French North Africa. The Light Gray was overpainted on the top surfaces by Non-Specular Blue Gray. On the side of the fuselage is the unit number (41), the role letter (S=Scout) and the aircraft within the unit (9).



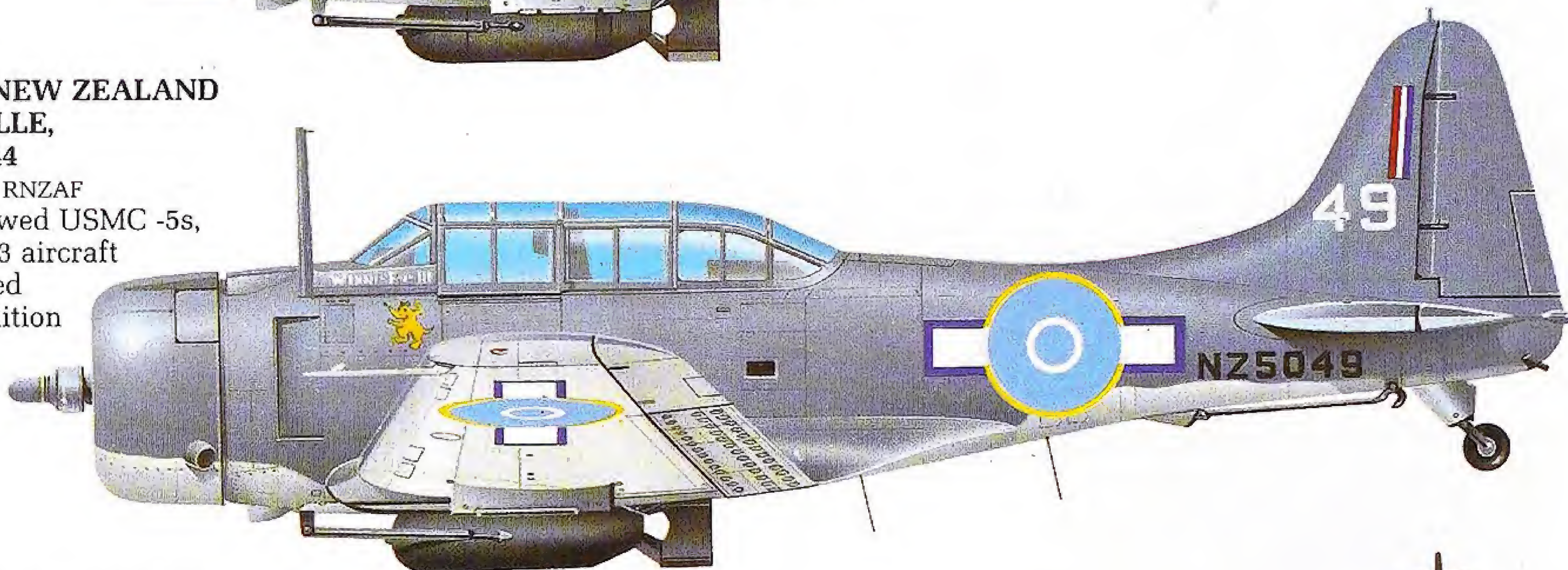
SBD-4, VMSB-243, 1st MARINE AIR WING, MUNDA, NEW GEORGIA, SOLOMON ISLANDS, AUGUST 1943

Radio navigation aids, a Hamilton Standard constant-speed prop and an electric fuel pump were improvements on the 780 -4s delivered. Wearing the short-lived red-bordered insignia, this Marine aircraft carries a 500lb "calling card" under the fuselage.



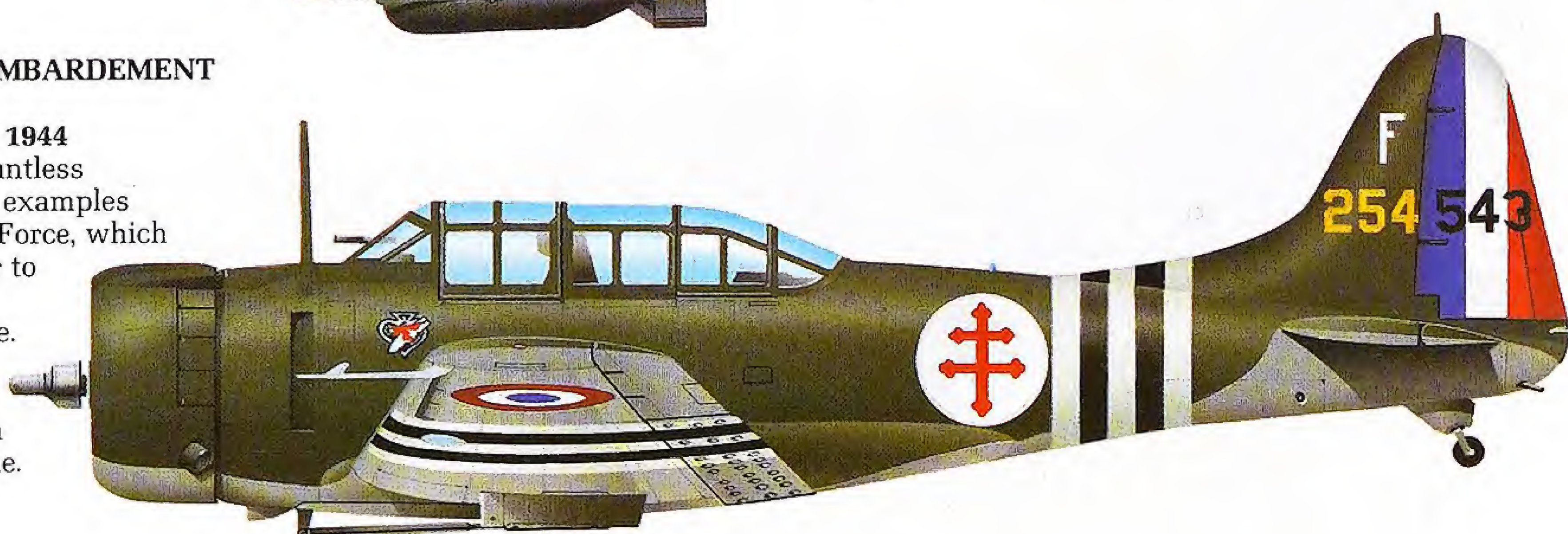
SBD-5, 25 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, PIVA, BOUGAINVILLE, SOLOMON ISLANDS, APRIL 1944

Two months of operations by the RNZAF against the Japanese, using borrowed USMC -5s, resulted in the loss of six of the 23 aircraft on 32 missions. The RNZAF retained the US color-scheme with the addition of modified roundels and fin flashes.



A-24B, GROUPE DE CHASSE-BOMBARDEMENT (GCB) 1/18 "VENDÉE," VANNES, FRANCE, NOVEMBER 1944

The USAAF ordered 953 of this Dauntless version for attack duties. Some 50 examples were passed on to the French Air Force, which used them near the end of the war to attack and harass the Germans retreating from the south of France. Olive Drab and Neutral Gray colors were overpainted with invasion stripes and in this case, a large Free French Cross of Lorraine.

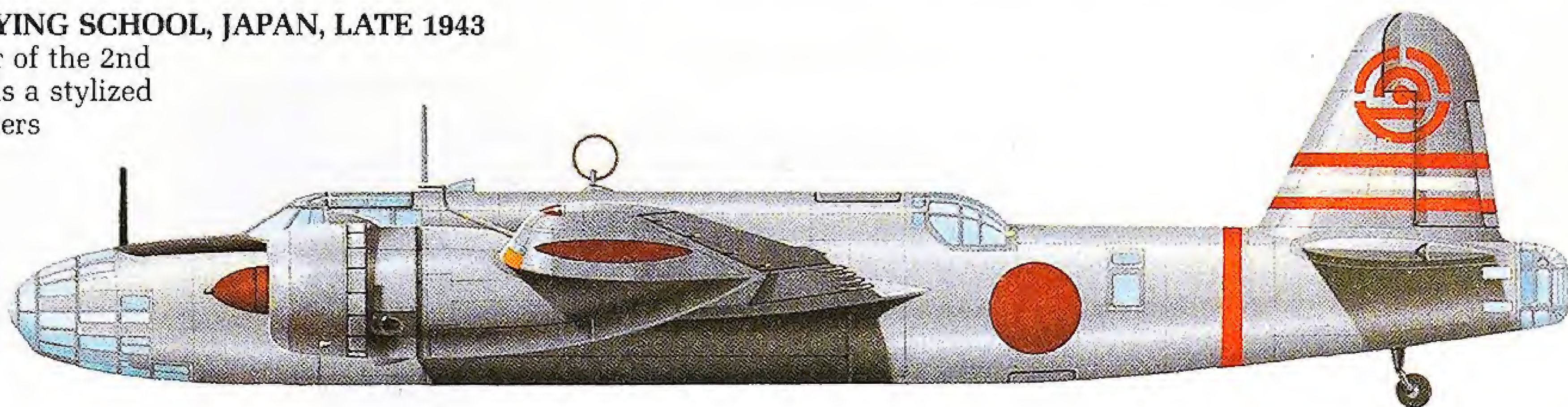


NAKAJIMA Ki-49 DONRYU

Named by the Japanese, Donryu (Storm Dragon) and code-named "Helen" by the Allies, the eight-seat Ki 49 was a heavy, underpowered bomber operated by the Army Air Force. The prototype flew in August 1938 and production aircraft made their first combat sortie on a raid against Port Darwin, Australia, on 19 February 1942. Defensive armament in later versions comprised 12.7mm MGs in nose, tail, ventral and beam positions, plus a single 20mm manually aimed cannon in the dorsal position. More than 800 were built, the type ending its career with the *kamikaze* pilots.

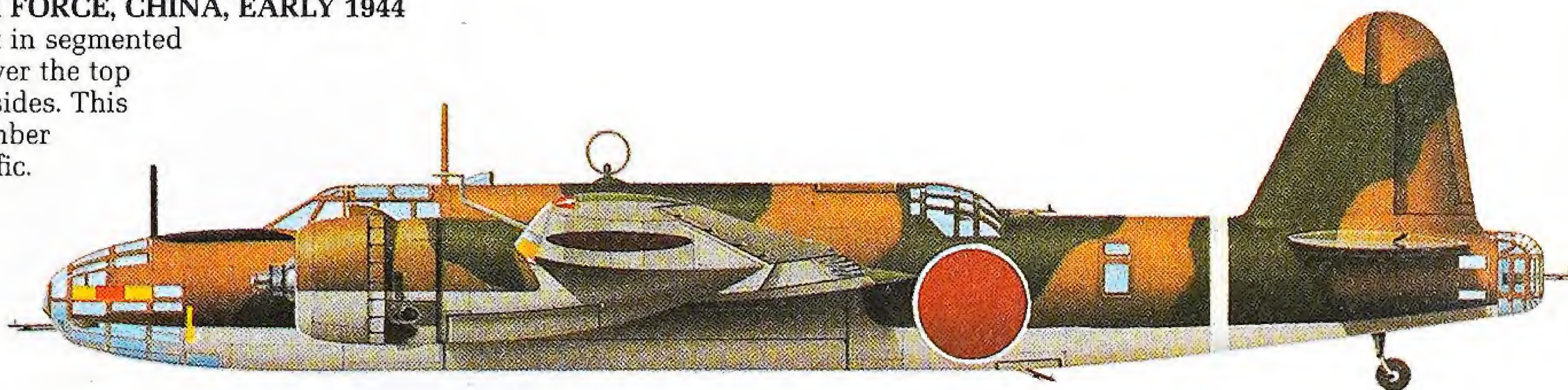
Ki 49-1, HAMAMATSU ARMY FLYING SCHOOL, JAPAN, LATE 1943

An unpainted aircraft of the leader of the 2nd Chutai (section). The tail marking is a stylized representation of the Kanji characters identifying the school.



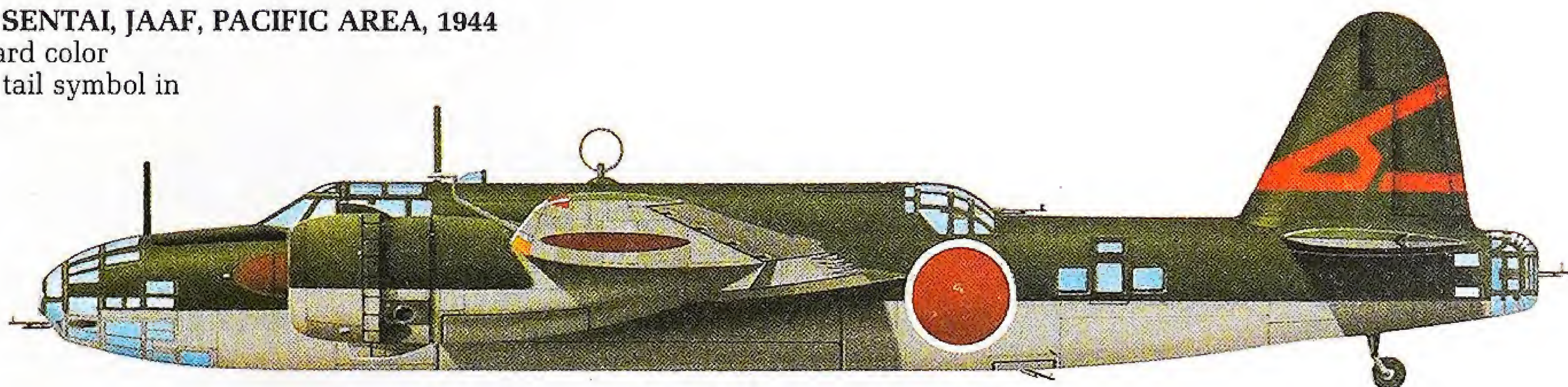
Ki 49-1, JAPANESE ARMY AIR FORCE, CHINA, EARLY 1944

An aircraft of an unknown unit in segmented green and brown camouflage over the top surfaces, with light gray undersides. This scheme was also used on a number of aircraft operating in the Pacific.



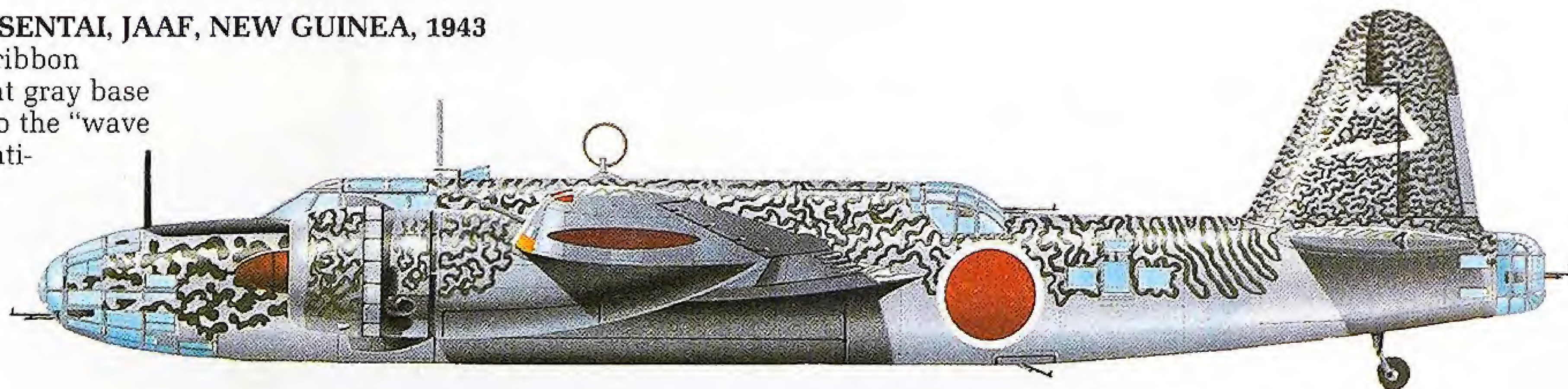
Ki 49-II-KO, 3rd CHUTAI, 61st SENTAI, JAAF, PACIFIC AREA, 1944

An aircraft in one of the standard color schemes used by the JAAF. The tail symbol in the Chutai color is an abstract representation of the Arabic numerals "61".



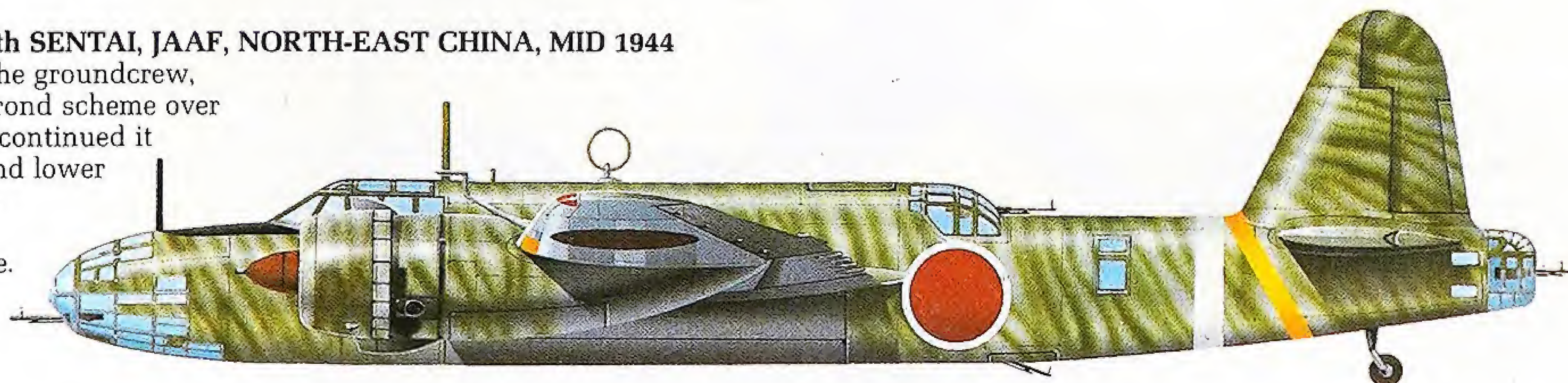
Ki 49-II-KO, 1st CHUTAI, 7th SENTAI, JAAF, NEW GUINEA, 1943

A finely executed dark green ribbon camouflage applied over a light gray base color. This scheme is similar to the "wave mirror" finishes sprayed on anti-shiping Ju 88s of the Luftwaffe.



Ki 49-II-KO, 3rd CHUTAI, 95th SENTAI, JAAF, NORTH-EAST CHINA, MID 1944

A painstaking spray job by the groundcrew, who have produced a palm frond scheme over the upper surfaces and have continued it around the engine nacelles and lower fuselage. The yellow stripe is in the Chutai color and the white band is a combat stripe.



MACCHI M.C.205

Based on the earlier M.C.200 Saetta, the M.C.202 Folgore (Lightning) was a major advance in fighter performance for the Regia Aeronautica. The German DB601 in-line engine gave the Italian pilots an aircraft capable of outperforming Allied fighters such as the Hurricane and P-40. About 1500 were built before production switched to the higher-powered Veltro (Greyhound) which represented the peak of Italian World War II fighter design. Poor industrial effort, however, resulted in only 262 being built before the end of hostilities.

M.C.205, 88 SQUADRIGLIA, 1 STORMO, SICILY, EARLY 1943

To update the air defense of Sicily, the 1st Stormo received the best fighter the industry could produce when, in February 1943, Veltros arrived. They were finished in a scheme of green mottle on Sand with Gray undersides and the standard white theater fuselage band and white spinner.



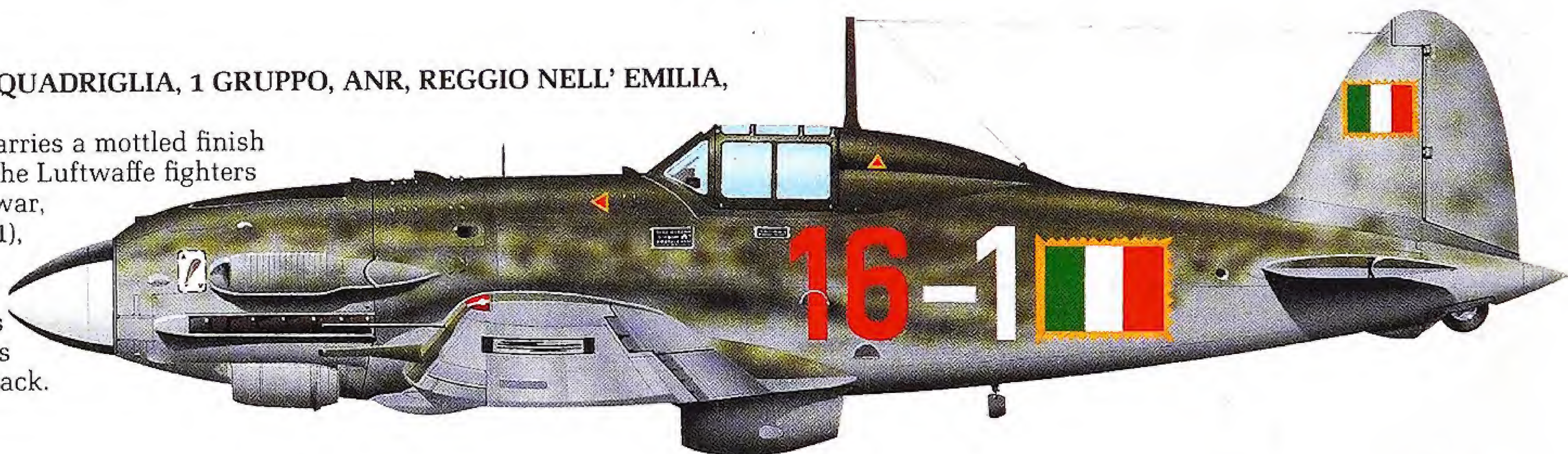
M.C.205 III SERIES, 2 SQUADRIGLIA, 1 GRUPPO, AERONAUTICA NAZIONALE REPUBLICANA, CAMPOFORMIDO, ITALY, 1944

Operating on the side of the Germans following the September 1943 armistice, ANR aircraft initially retained their original finish as shown on this Veltro which has the Dark Green "ringlet" pattern over a Yellow Ocher base with a Light Gray underside. The black nose spiral shows a definite German influence.



M.C.205 III SERIES, 1 SQUADRIGLIA, 1 GRUPPO, ANR, REGGIO NELL' EMILIA, ITALY, 1944

Aircraft 16 of the unit carries a mottled finish similar to that used on the Luftwaffe fighters towards the end of the war, namely Brown Violet (81), Blue Green (83) over Light Gray. On the nose is the Ace of Clubs badge and the spinner is segmented white and black.



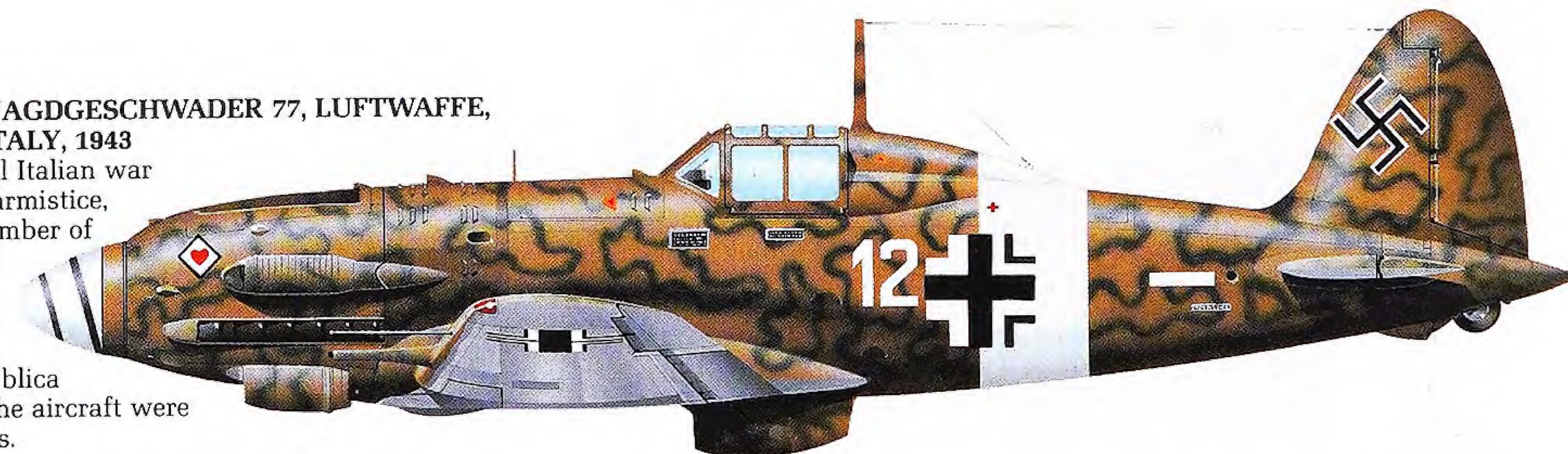
M.C.205 III SERIES, 155 GRUPPO, 51 STORMO, CO-BELLIGERENT AIR FORCE, LECCE-GALATINA, ITALY, 1944

A roundel in the Italian national colours was the obvious choice for aircraft flown with the Allies. Existing camouflage was retained, as were the famous unit badges such as the Cat and Mouse marking on the fin.



M.C.205 III SERIES, II/JAGDGESCHWADER 77, LUFTWAFFE, LONATE POZZOLO, ITALY, 1943

Having requisitioned all Italian war material following the armistice, the Germans gave a number of Veltros hastily applied Luftwaffe markings and pressed them into service. With the formation of the Repubblica Sociale Italiana (RSI), the aircraft were returned to Italian units.

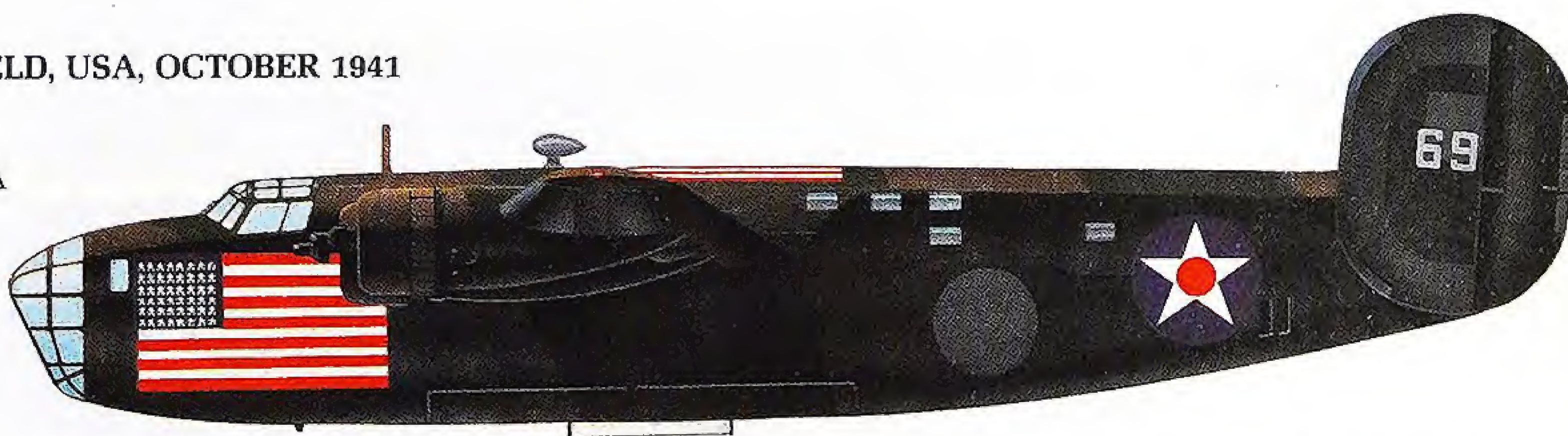


B-24 LIBERATOR

Although overshadowed by the B-17 Flying Fortress, the B-24 had a number of virtues which made it a much more sought-after bomber: it was fast (300mph at 30,000ft), capable of carrying 8000lb of bombs, and had a range of more than 2000 miles. The prototype XB-24 flew in December 1939 and first deliveries were made in 1941 to the RAF. The worth of this big aircraft was soon realized and production took the design through nine major variants to peak at 18,482, a run greater than any other US World War II combat aircraft.

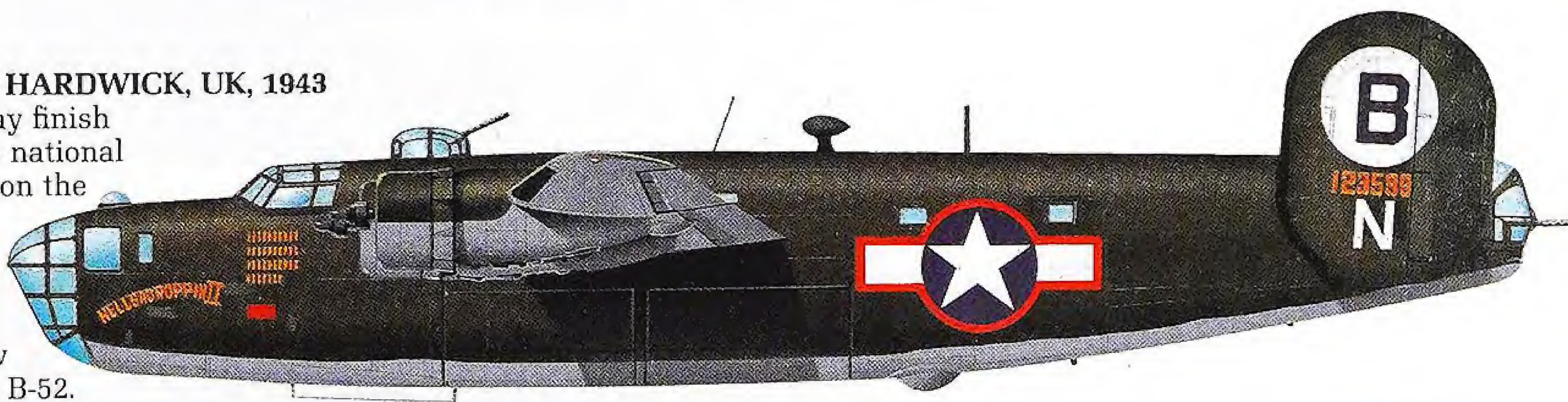
LB-30B, US ARMY AIR FORCE, BOLLING FIELD, USA, OCTOBER 1941

An example of neutrality markings is shown on this transport Liberator, built against a British order and requisitioned by the USAAF. A painted-out RAF roundel can be discerned on the fuselage, while on the top of the cabin is a further US flag marking. Aircraft of this type shuttled about the world just before Pearl Harbor.



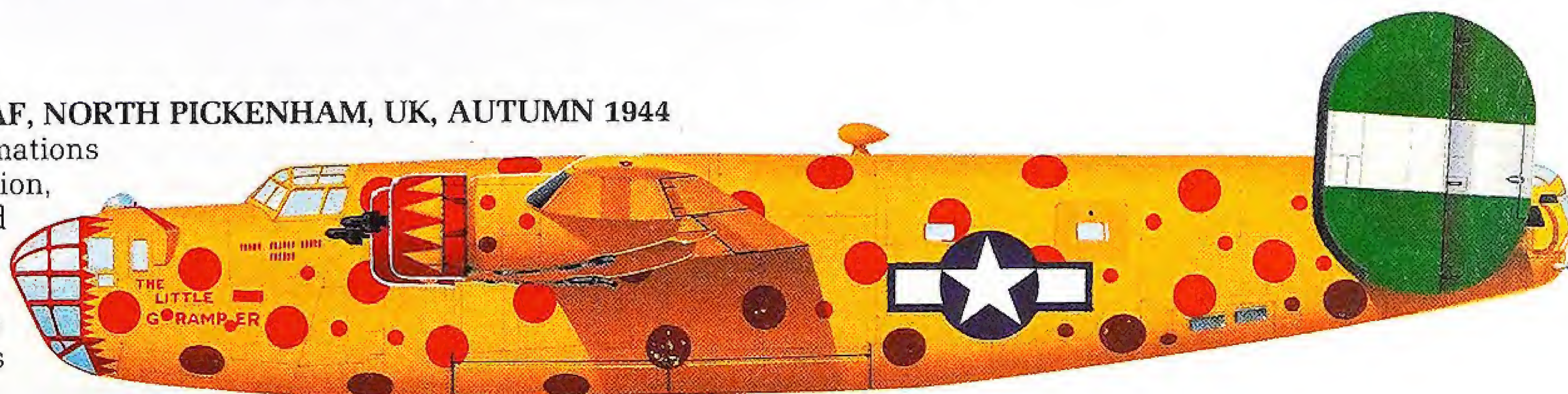
B-24D, 93rd BOMB GROUP, USAAF, HARDWICK, UK, 1943

Standard Olive Drab and Neutral Gray finish with the short-lived red-outline to the national insignia, individual aircraft letter (N) on the lower fin and group symbol above, overlapping on to the rudder. This was the oldest B-24 Group in the 8th AF and flew more missions than any other unit. After the war the unit flew the B-29, B-47 and, more recently, the B-52.



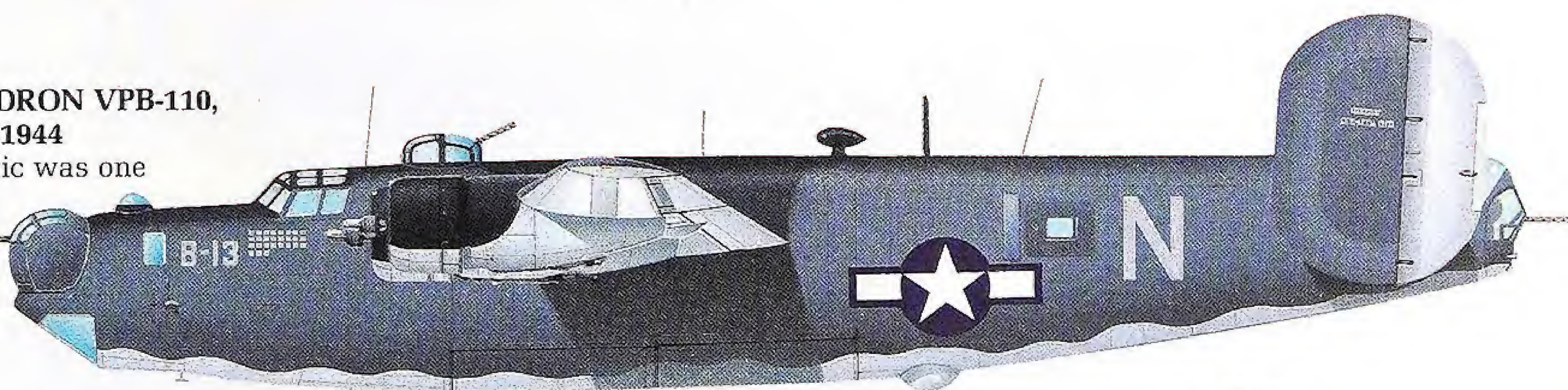
B-24D-90, 491st BOMB GROUP, USAAF, NORTH PICKENHAM, UK, AUTUMN 1944

To assist the huge 8th AF bomber formations to form up in the right order and position, each group had a brightly-painted lead ship on which the rest of the unit would formate. This done, the lead ship would head for home, leaving the group to the mission. *Little Gramper* is typical and, like most lead ships, was a war-weary aircraft.



PB4Y-1, PATROL BOMBER SQUADRON VPB-110, US NAVY, DEVON, UK, WINTER 1944

Anti-U-boat patrols over the Atlantic was one of the tasks of these aircraft based in the west of England. Colors were non-specular Sea Blue on the top surfaces, intermediate Blue on the vertical surfaces with Insignia White undersides.



Plan view of the over-water scheme applied to UK-based USN Liberators.

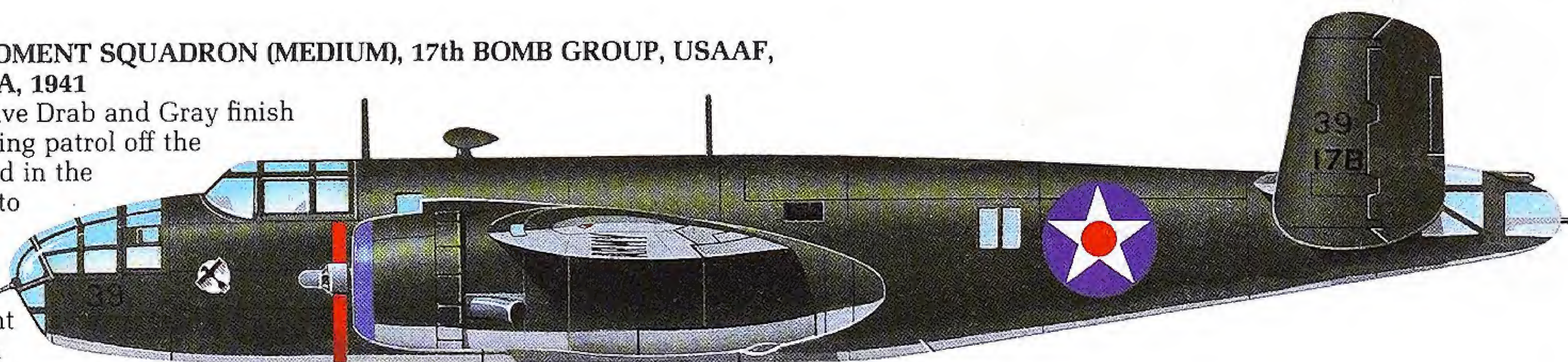


NORTH AMERICAN B-25

"A pilot's airplane" best describes the docile and adaptable Mitchell. Operating mainly in the daylight bombing role, it fought on all fronts and as well as equipping the US Air Forces, hundreds were supplied to Allied nations. A production contract was awarded to NA before the first aircraft had flown, an event which took place on 19 August 1940. As the war progressed, so too did development of the B-25, including solid-nose versions and one with a 75mm cannon for anti-shipping use. Nearly 11,000 were built.

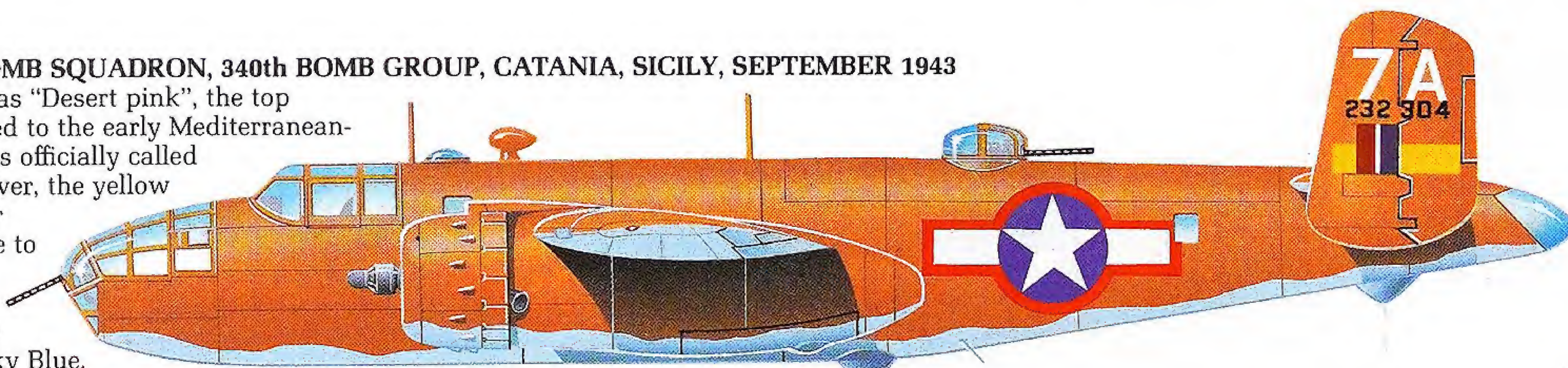
B-25A, 34th BOMBARDMENT SQUADRON (MEDIUM), 17th BOMB GROUP, USAAF, McCHORD FIELD, USA, 1941

This early model in Olive Drab and Gray finish operated on anti-shipping patrol off the US West Coast. The red in the national marking was to remain until some five months after Pearl Harbor, when it was removed to prevent any possible confusion with the Japanese insignia.



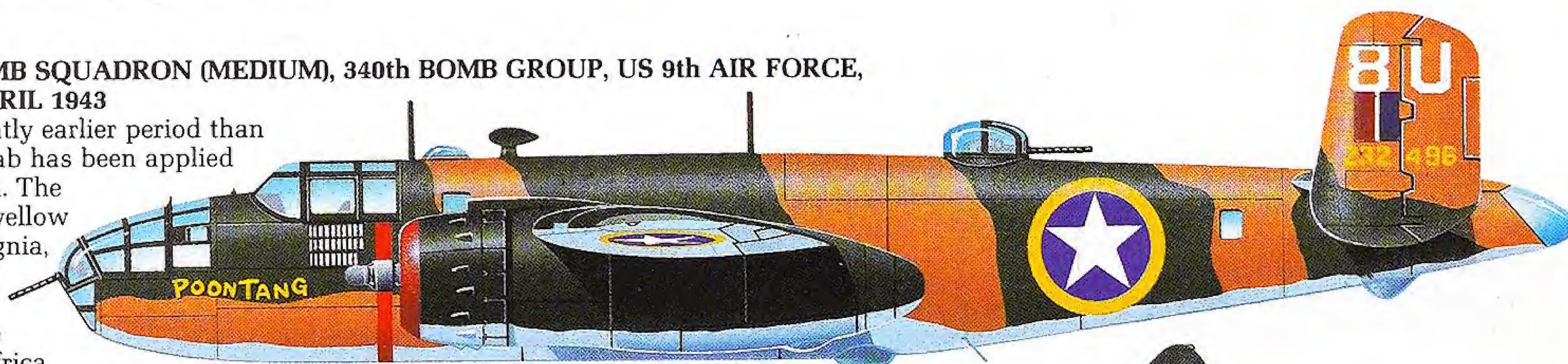
B-25C-10, 487th BOMB SQUADRON, 340th BOMB GROUP, CATANIA, SICILY, SEPTEMBER 1943

Commonly known as "Desert pink", the top surface color applied to the early Mediterranean-based Mitchells was officially called Desert Sand. However, the yellow pigment faded after prolonged exposure to sunlight, resulting in a pronounced pinkish shade. The undersides were Sky Blue. The red-bordered "star and bar" was short-lived – it was initiated in June 1943 and officially removed on 14 August 1943, the red being replaced by blue.



B-25C-15, 488th BOMB SQUADRON (MEDIUM), 340th BOMB GROUP, US 9th AIR FORCE, SFAX, TUNISIA, APRIL 1943

An aircraft at a slightly earlier period than that above. Olive Drab has been applied over the Desert Sand. The unofficially painted yellow surround to the insignia, was used on aircraft involved in Operation Torch, the invasion of North Africa.

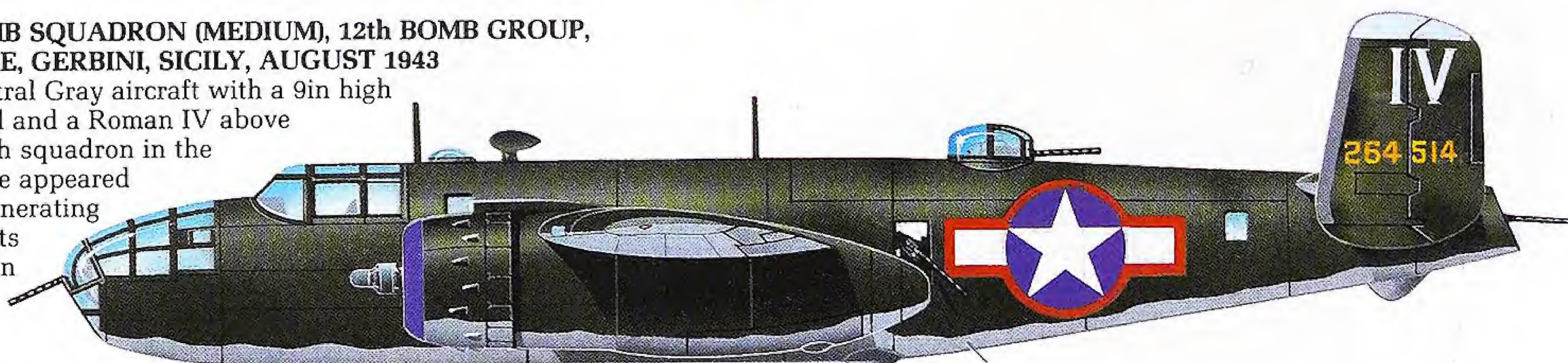


Plan view of Poontang with the star marking above both wings to prevent mistaken identity.



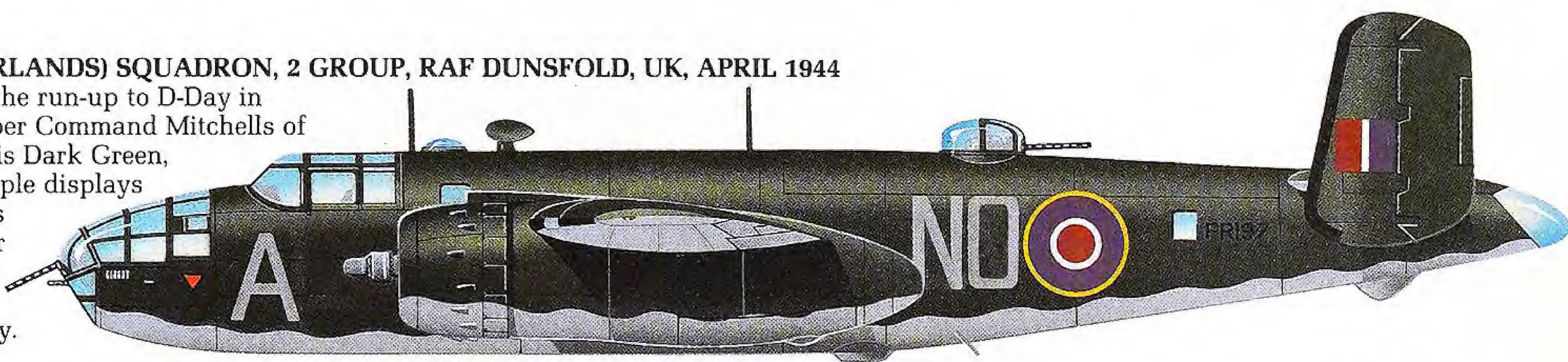
B-25C-20, 81st BOMB SQUADRON (MEDIUM), 12th BOMB GROUP, US 12th AIR FORCE, GERBINI, SICILY, AUGUST 1943

An Olive Drab/Neutral Gray aircraft with a 9in high serial across the tail and a Roman IV above indicating the fourth squadron in the Group. This practise appeared to have been self-generating among the B-25 units in the Mediterranean theater.



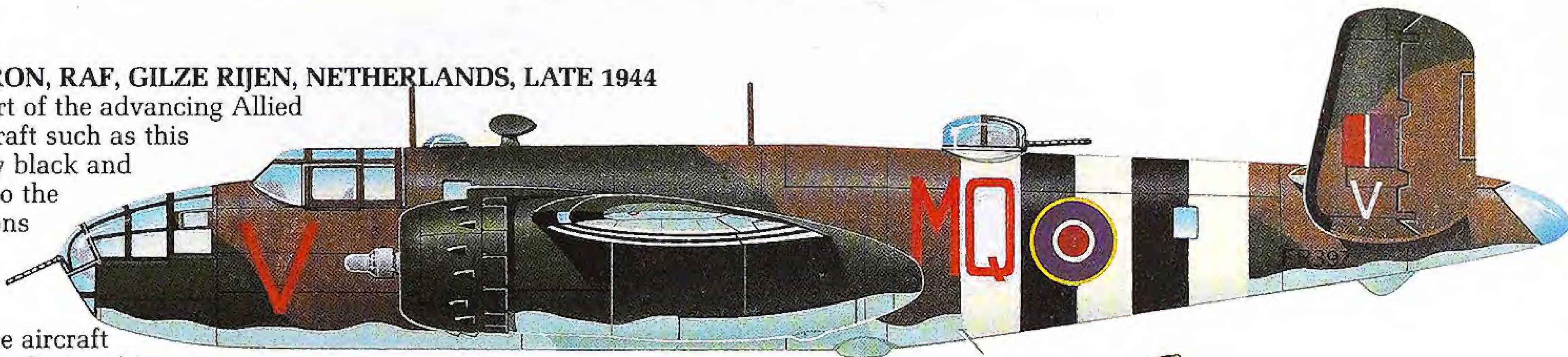
Mk II, 320 (NETHERLANDS) SQUADRON, 2 GROUP, RAF DUNSFOLD, UK, APRIL 1944

Very active during the run-up to D-Day in June were the Bomber Command Mitchells of the Dutch units. This Dark Green, Medium Gray example displays six mission symbols on the nose together with a small yellow triangle denoting its crew's nationality.

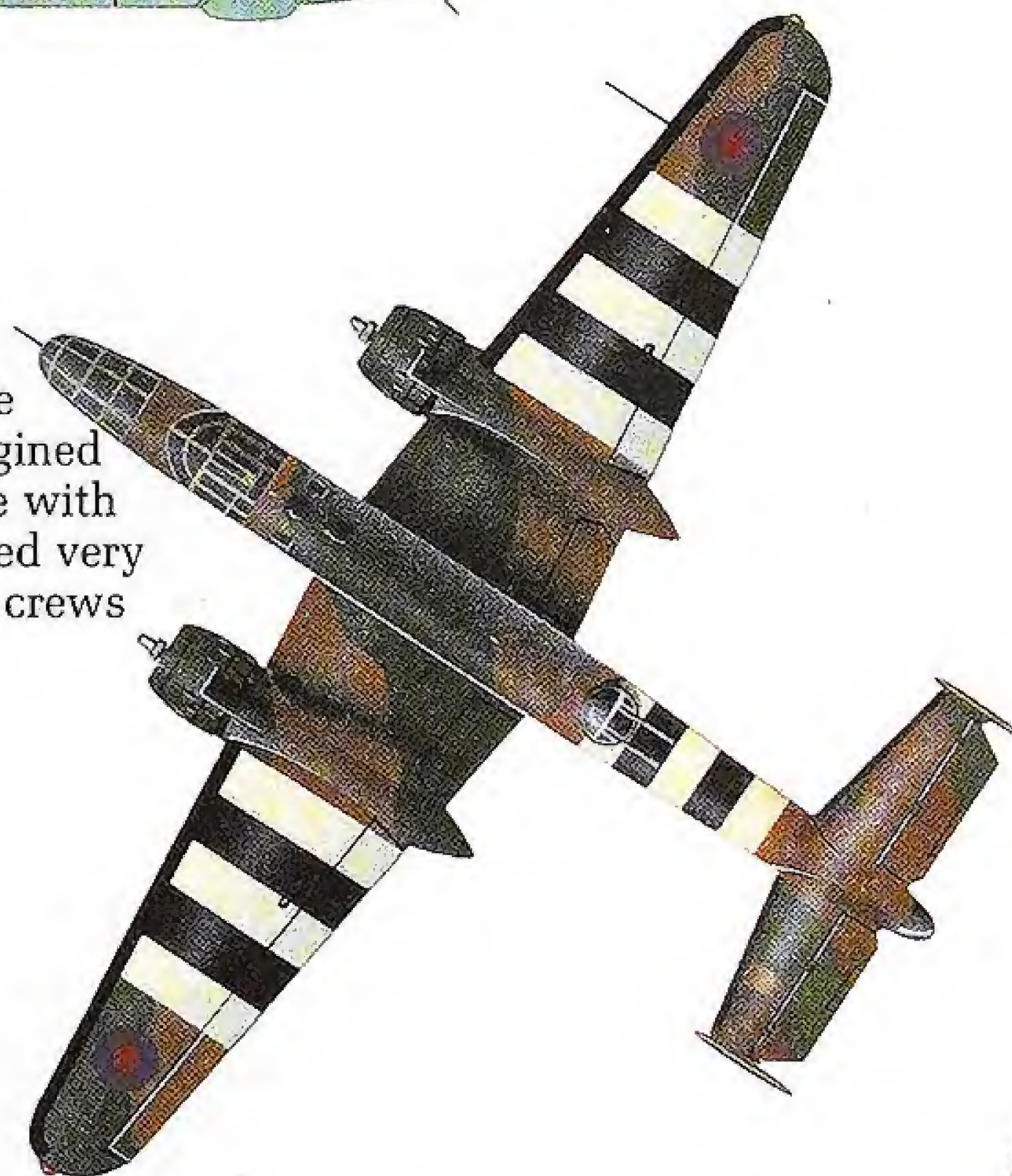


Mk II, 226 SQUADRON, RAF, GILZE RIJEN, NETHERLANDS, LATE 1944

Operating in support of the advancing Allied armies, tactical aircraft such as this retained their D-Day black and white striping due to the pressure of operations which prevented their removal. The red codes are supplemented by the aircraft letter repeated on the fin in white.

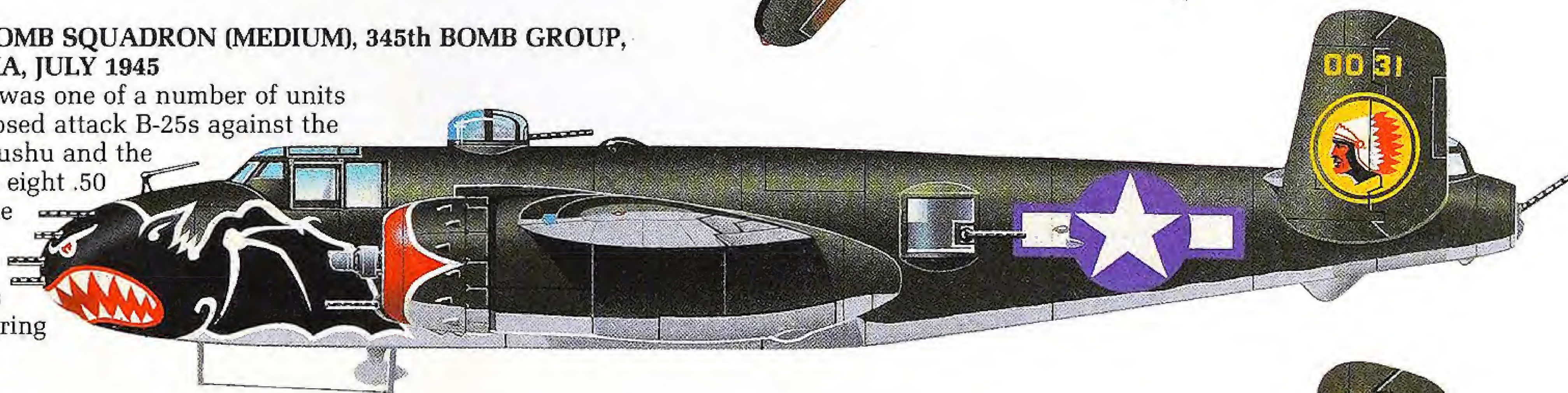


Plan view showing the distinctive D-Day stripes which, for twin-engined aircraft, were 24in wide. The care with which they were applied depended very much on the effort of the ground crews the day before the invasion.



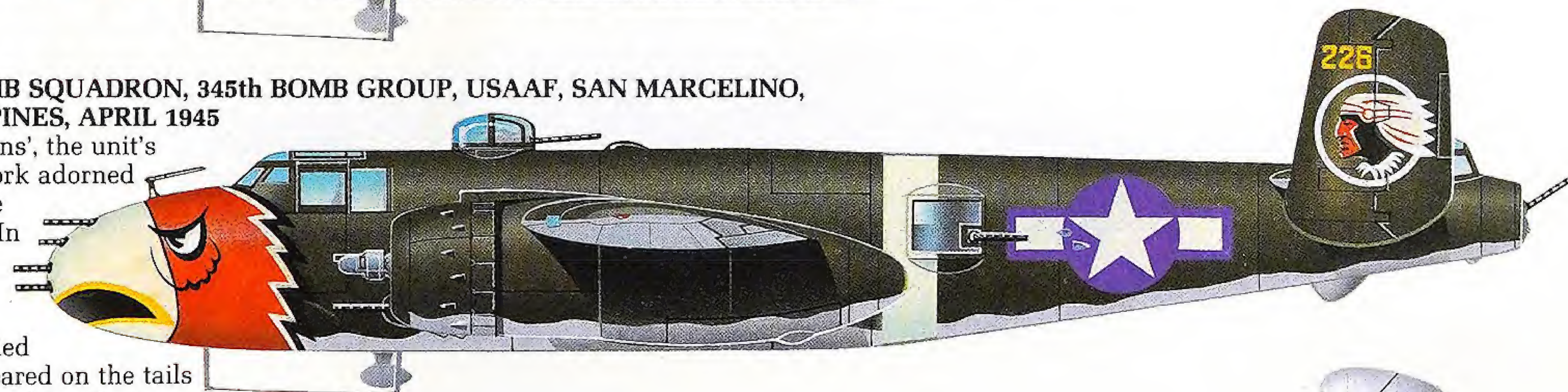
B-25J-32, 499th BOMB SQUADRON (MEDIUM), 345th BOMB GROUP, USAAF, IE SHIMA, JULY 1945

"Bats Outa Hell" was one of a number of units operating solid-nosed attack B-25s against the Japanese over Kyushu and the Sea of Japan. The eight .50 caliber guns in the nose and the further four on the fuselage sides produced a withering hail of lead.



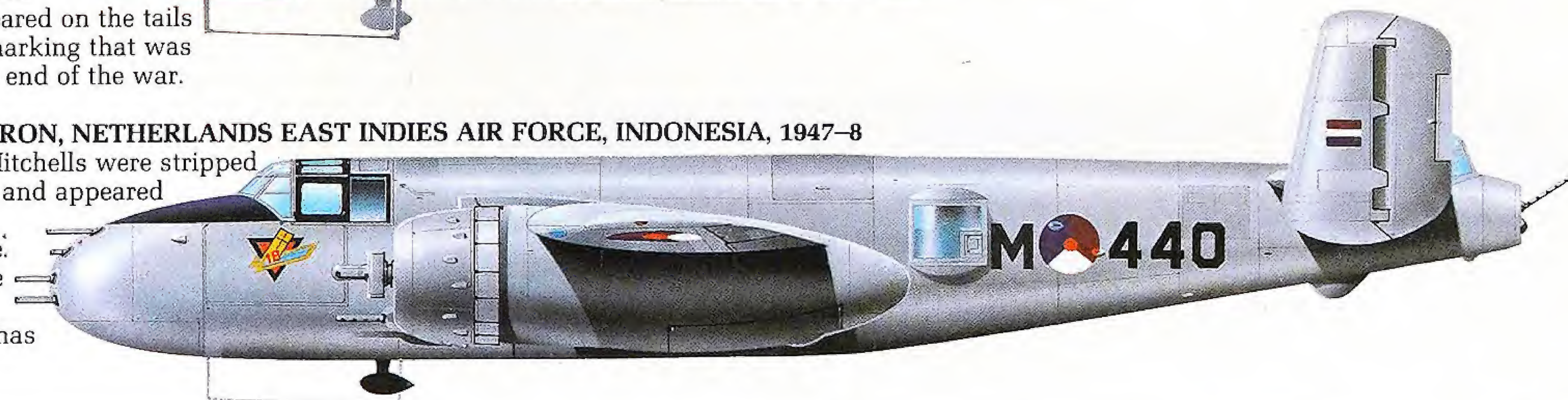
B-25J, 498th BOMB SQUADRON, 345th BOMB GROUP, USAAF, SAN MARCELINO, LUZON, PHILIPPINES, APRIL 1945

Called 'The Falcons', the unit's flamboyant artwork adorned its B-25s from the summer of 1944. In July 1944, the Group adopted the name 'Air Apaches' and a Red Indian head appeared on the tails of its aircraft, a marking that was retained until the end of the war.



B-25J, 18 SQUADRON, NETHERLANDS EAST INDIES AIR FORCE, INDONESIA, 1947-8

Many post-war Mitchells were stripped of their warpaint and appeared like this Dutch-operated example. With little chance of aerial combat, the dorsal turret has been removed.

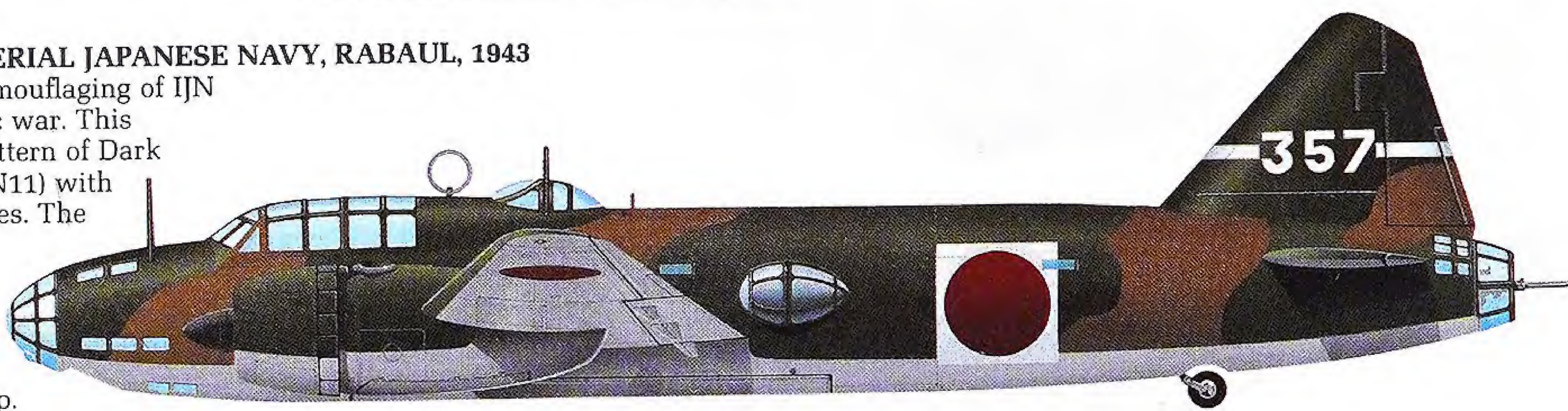


MITSUBISHI G4M 'BETTY'

Of all the Japanese bombers produced during World War II, Betty was probably the best known. Naval-operated, it had a considerable range (in excess of 3700 miles) achieved by structural lightness and a total disregard for armor protection, the latter proving to be the type's weakness when Allied opposition increased later in the war. First flight of the prototype was in October 1939 and production extended through three main variants – G4M1, G4M2 and G4M3 – until the end of the war when the last of 2446 aircraft was completed.

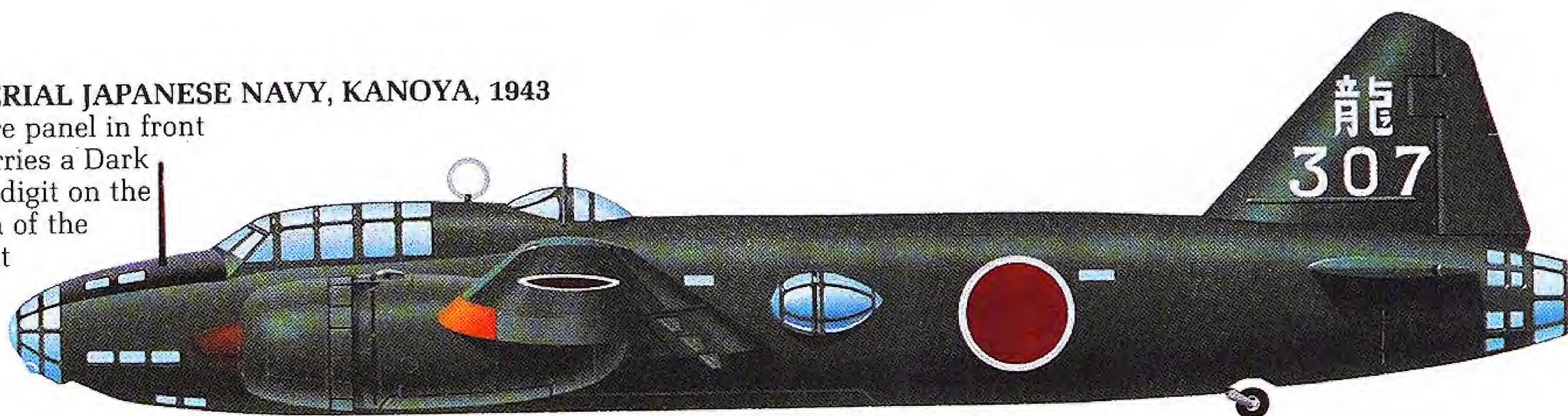
G4M1, 705th KOKUTAI, IMPERIAL JAPANESE NAVY, RABAU, 1943

Official orders covered the camouflaging of IJN aircraft throughout the Pacific war. This example carries a segment pattern of Dark Green (N2), Medium-Brown (N11) with Light Gray (N10) undersurfaces. The fuselage Hinomaru could be applied on a white square as here or with a 75mm white surround. Unusually this aircraft is devoid of the yellow wing leading edge strip.



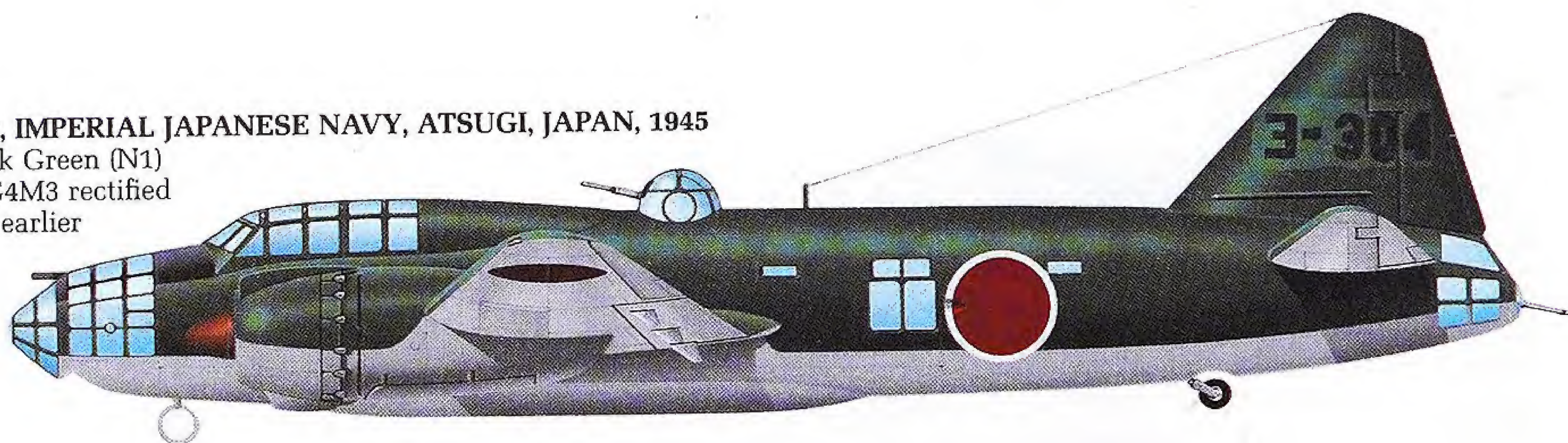
G4M1, 761st KOKUTAI, IMPERIAL JAPANESE NAVY, KANOYA, 1943

Apart from the black anti-glare panel in front of the cockpit, this aircraft carries a Dark Green overall finish. The first digit on the fin indicates the basic mission of the aircraft, in this case 3 shows it to be a torpedo bomber. Others included 1 = fighter, 2 = dive bomber and 4 = trainer.



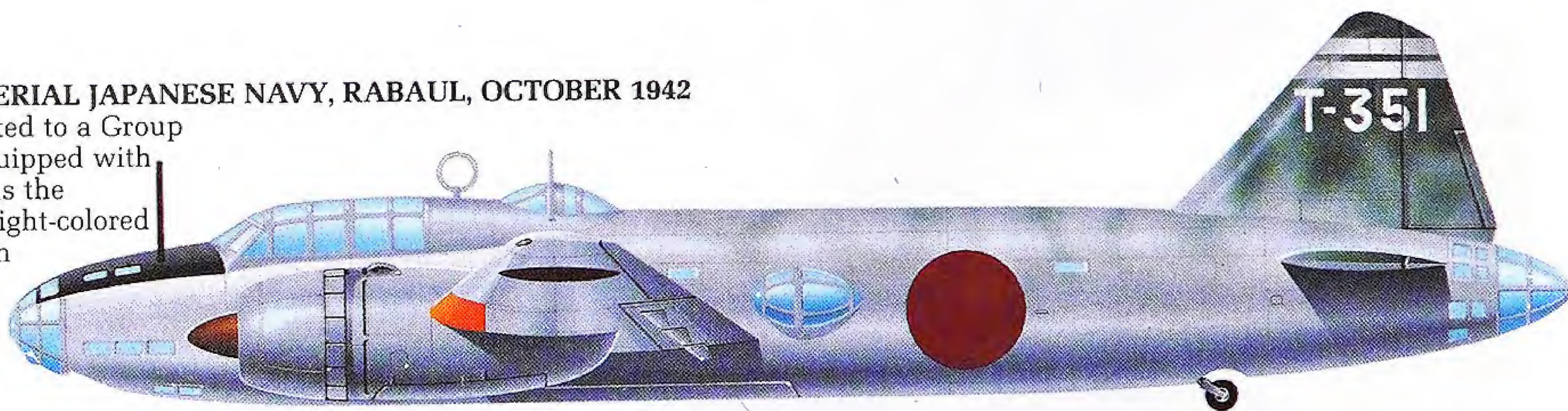
G4M3, YOKOSUKA KOKUTAI, IMPERIAL JAPANESE NAVY, ATSUGI, JAPAN, 1945

A late-production Betty in Black Green (N1) and natural metal finish. The G4M3 rectified the lack of armor protection in earlier versions and incorporated a new tail turret and dihedral on the tailplanes. Only about 60 were completed by the end of the war.



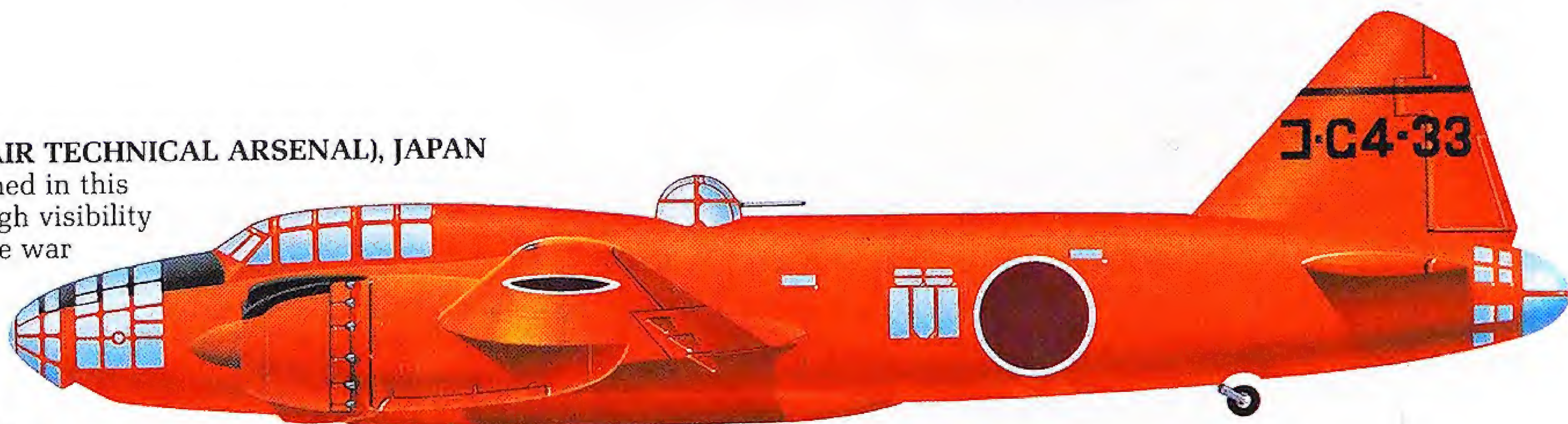
G4M1, TAKAO KOKUTAI, IMPERIAL JAPANESE NAVY, RABAU, OCTOBER 1942

During the war, a Kokutai equated to a Group formed of three Hikotai each equipped with up to 24 aircraft; the Hikotai was the equivalent of a squadron. This light-colored example is believed to have been in natural metal finish with a dark green mottle over the top surfaces.



G4M2A, KOKU GIJITSU SHO (AIR TECHNICAL ARSENAL), JAPAN

Experimental aircraft were finished in this bright overall orange color for high visibility during trials. However, late in the war orders were issued that this practise was to stop and darker camouflage used. The G4-33 on the fin indicated the 33rd development aircraft in the G4 land-based attack aircraft series.

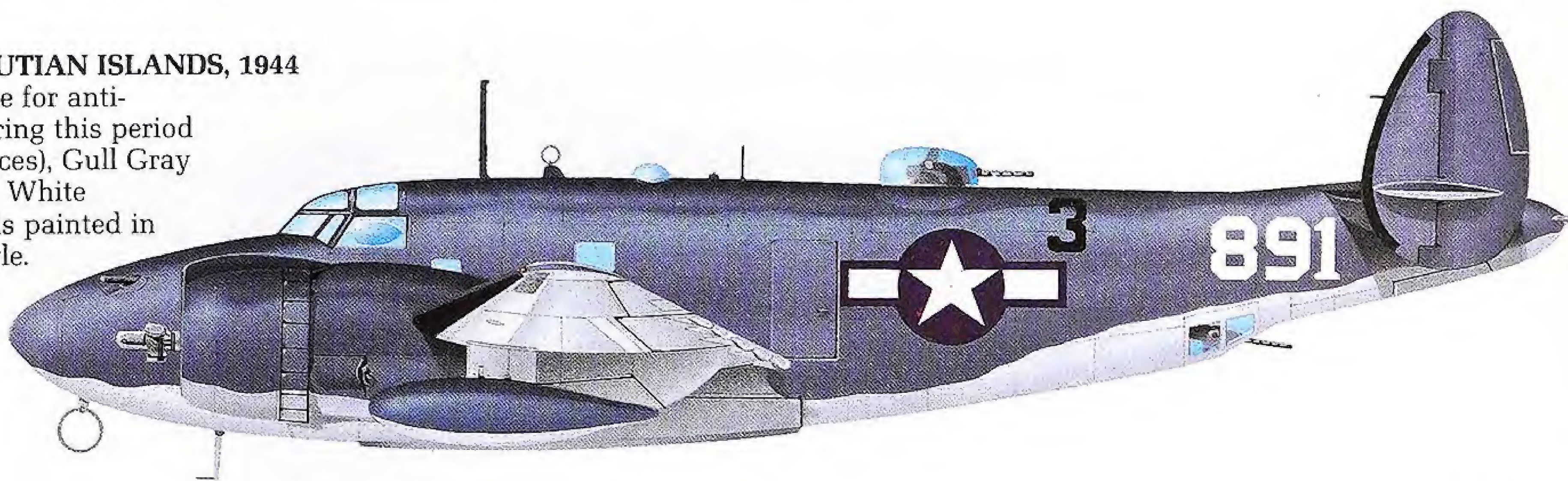


LOCKHEED VENTURA

A heavier and more powerful development of the Hudson, the Ventura made its first flight on 31 July 1941 and deliveries to the RAF began a year later. Despite improvements and having an additional gun position under the rear fuselage, the Ventura was unsuccessful as a daylight bomber and with 394 delivered, the RAF withdrew the type in mid-1943. It operated in the reconnaissance role with some Commonwealth air arms and as the B-34 with the USAAF and PV-1 with the US Navy.

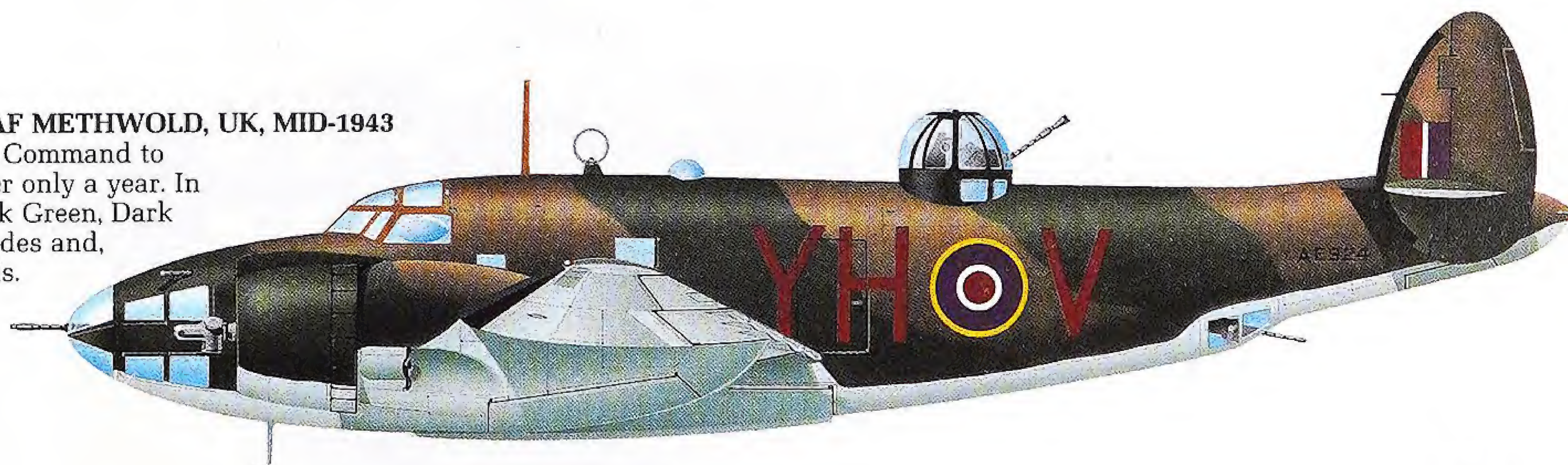
PV-1, VB-135, US NAVY, ALEUTIAN ISLANDS, 1944

The official US Navy camouflage for anti-submarine warfare aircraft during this period was Gull Gray Dark (top surfaces), Gull Gray Light (sides) and Non-specular White (undersides). The white serial is painted in an unusually non-standard style.



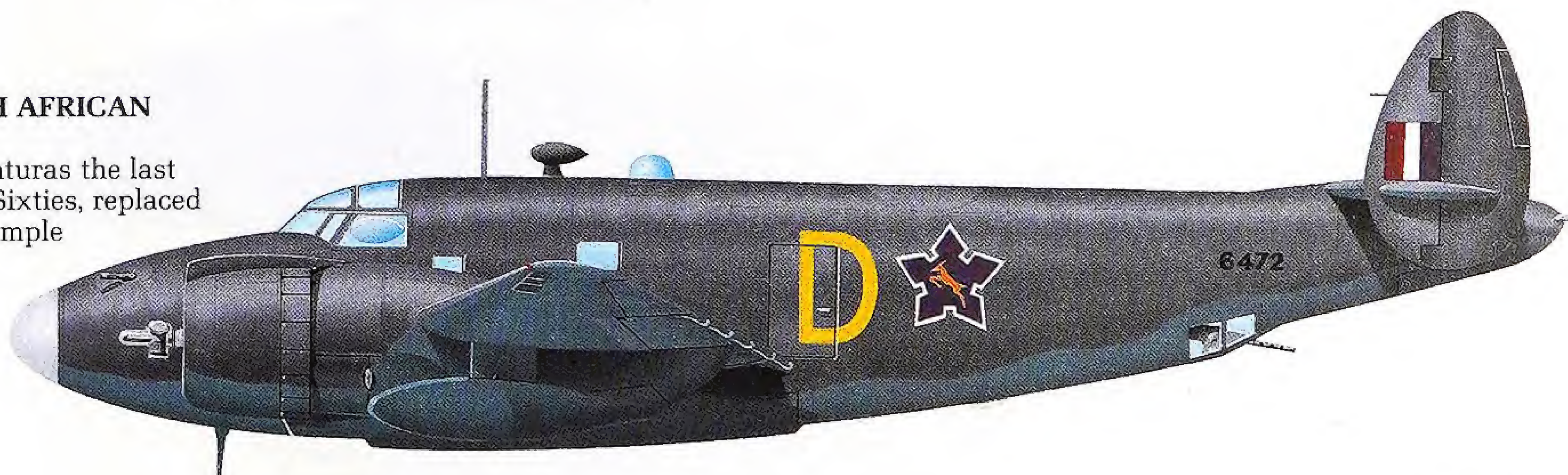
Mk II, 21 SQUADRON, RAF METHWOLD, UK, MID-1943

Losses forced RAF Bomber Command to withdraw the Ventura after only a year. In service its colors were Dark Green, Dark Earth and Sky with red codes and, on some aircraft, red serials.



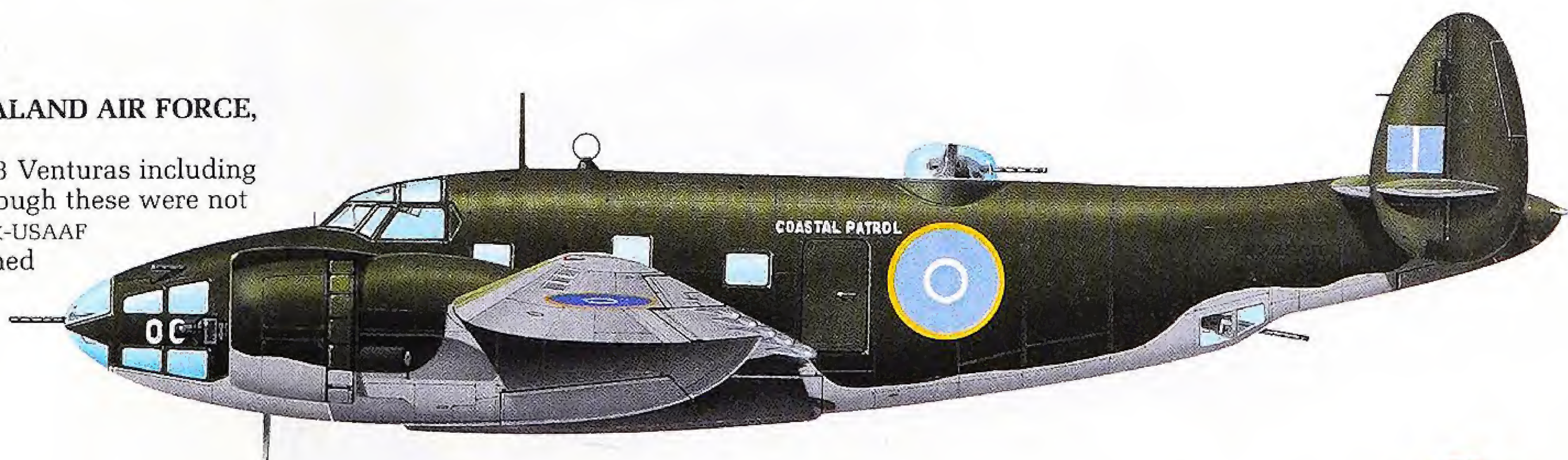
GR.5, 17 SQUADRON, SOUTH AFRICAN AIR FORCE, LATE-1950s

Seven SAAF units operated Venturas the last being withdrawn in the early Sixties, replaced by Avro Shackletons. This example has the current national marking first introduced in 1957. The black serial is almost lost.



RB-34, ROYAL NEW ZEALAND AIR FORCE, WHENUAPAI, 1946

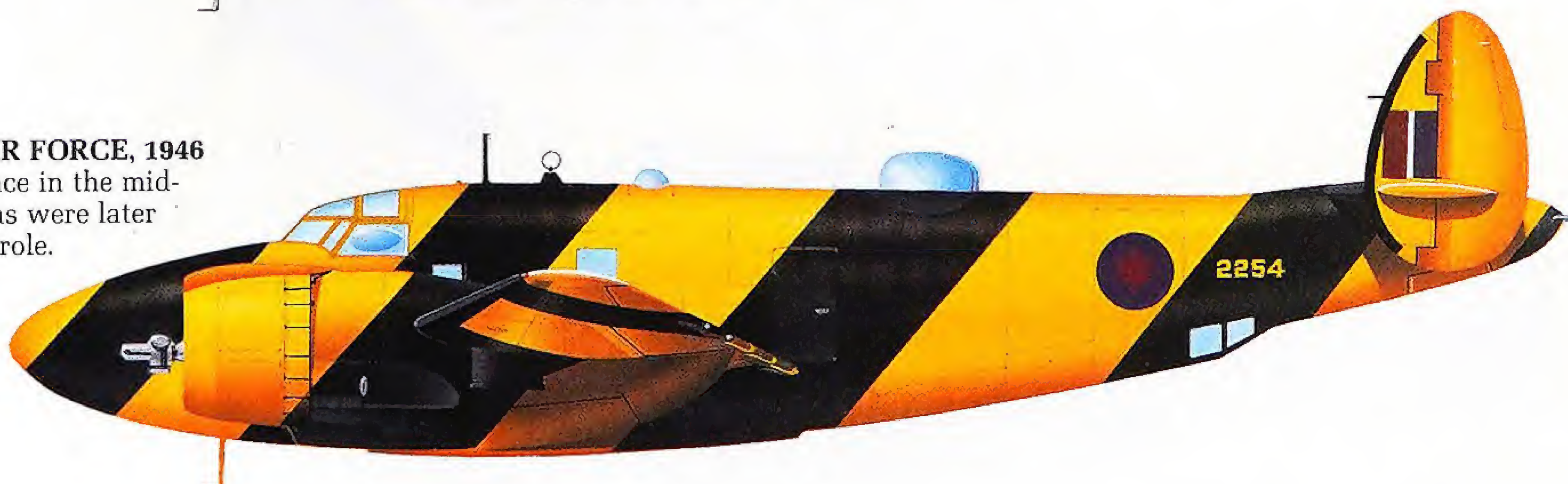
New Zealand received 143 Venturas including 23 RB-34 Lexingtons although these were not used on operations. As ex-USAAF machines they were finished in medium green and neutral gray.



GR.5, ROYAL CANADIAN AIR FORCE, 1946

Initially used for reconnaissance in the mid-war period, Canadian Venturas were later relegated to the target-towing role.

The maple leaf insignia was only used in this style for a short period before a white ring was included inside the dark blue roundel.

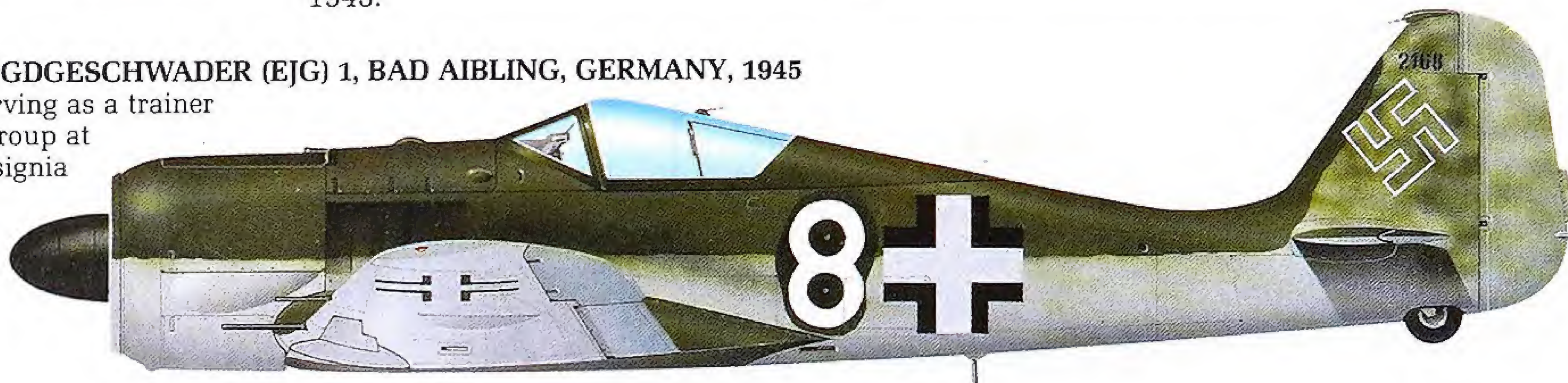


FOCKE- WULF Fw 190

Brainchild of Kurt Tank, the Fw 190 was widely considered one of the best fighter aircraft produced during World War II. It combined a large air-cooled radial engine with a tapering fuselage structure and its rugged design allowed for the development of variants for close air support (Fw 190F) and fighter-bomber (Fw 190G) roles. The Fw 190A entered service in mid-1941 and temporarily outclassed the Spitfires of RAF Fighter Command. Production of all types of Fw 190 reached more than 19,000 by 1945.

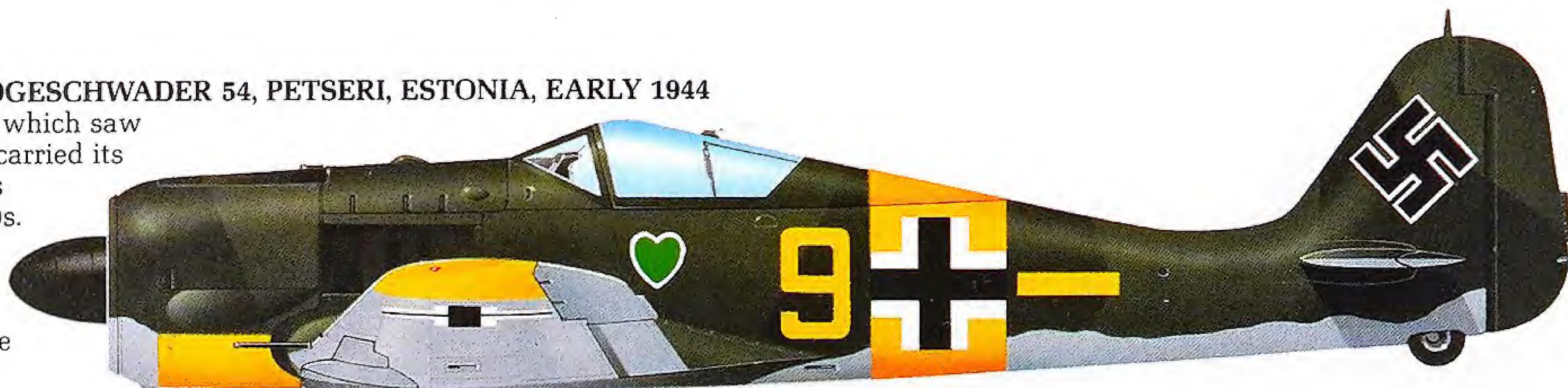
Fw 190A-3, ERGANZUNGSJAGDGESCHWADER (EJG) 1, BAD AIBLING, GERMANY, 1945

An early production model serving as a trainer with a Replacement Fighter Group at the end of the war. Outline insignia was very much the order of the day with few markings apart from the individual aircraft number.



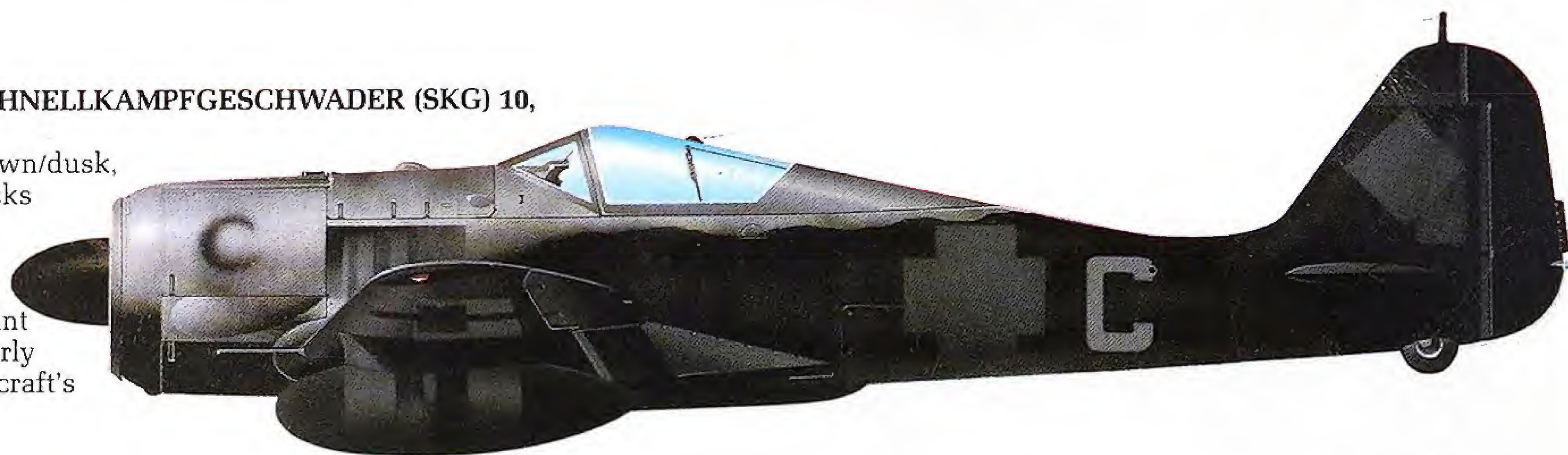
Fw 190A-5, II GRUPPE JAGDGESCHWADER 54, PETSERI, ESTONIA, EARLY 1944

The famous "Grunherz" unit which saw combat throughout the war, carried its insignia on the fuselage of its Bf 109s and, later, the Fw 190s. Yellow Eastern Front markings brightened the dull two-tone green scheme but tended to compromise the overall camouflage effect.



Fw 190A-5/U8, I GRUPPE SCHNELLKAMPFGESCHWADER (SKG) 10, POIX, FRANCE, MID-1943

To cloak their tip-and-run, dawn/dusk, low-level fighter-bomber attacks on UK targets, these Jabo "Butcher Birds" (Luftwaffe slang for the Fw 190) were given a coat of matt black paint over all markings. Only a poorly defined letter revealed the aircraft's identity.

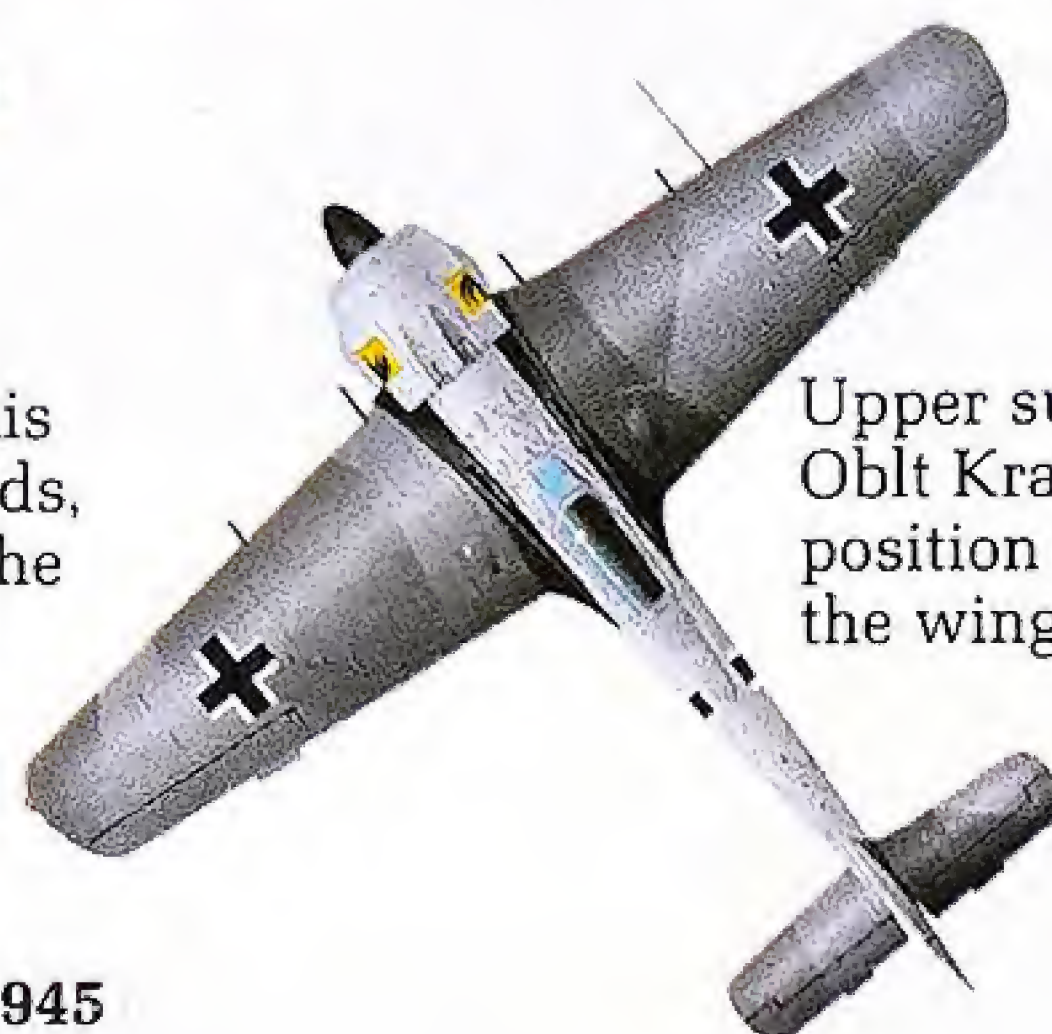
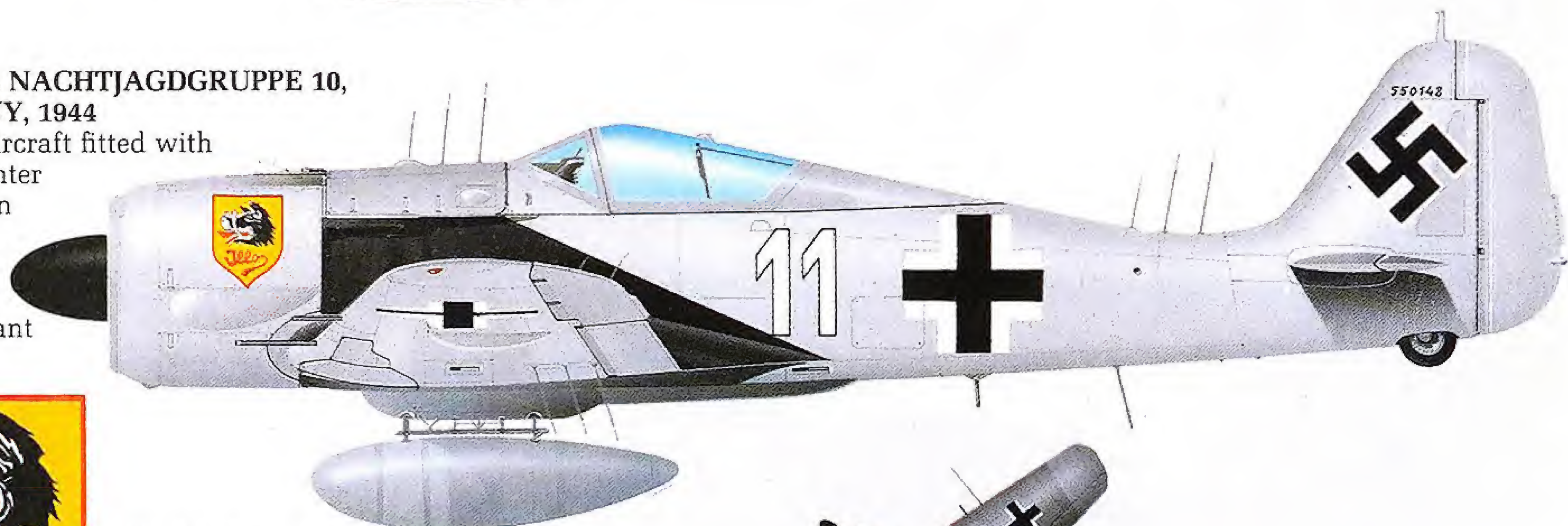


Fw 190A-6/R11, 1 STAFFEL NACHTJAGDGRUPPE 10, WERNEUCHEN, GERMANY, 1944

One of a small number of aircraft fitted with Neptune radar for night fighter duties around Berlin early in 1944. Transmitter/receiver aerials were located on the fuselage and wings. Pilot of this aircraft was Oberleutnant Krause.



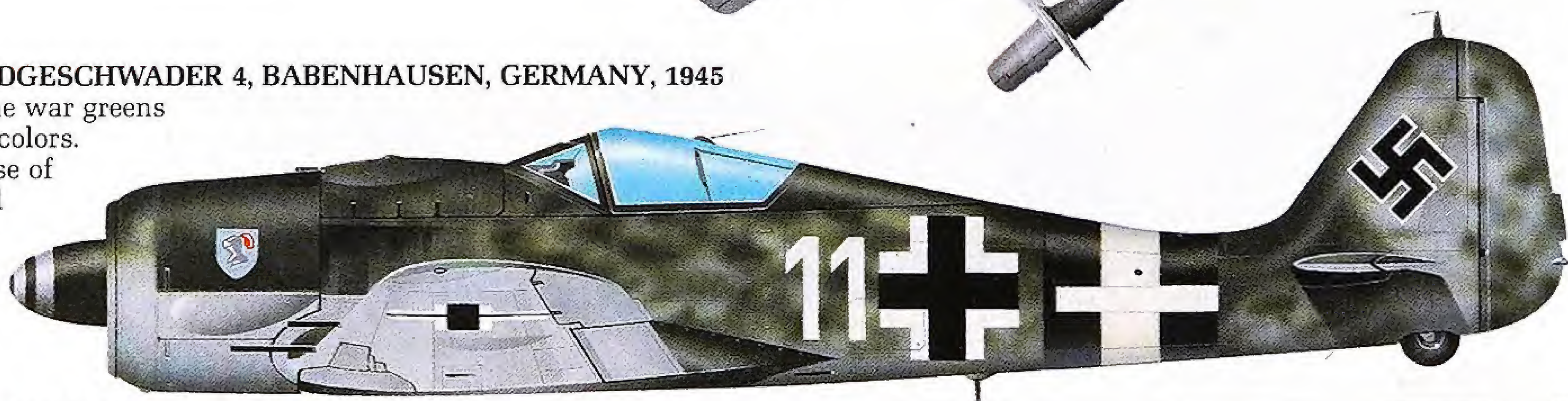
"Wilde Sau" (Wild Boar) emblem incorporating the nickname "Illo" of Oblt Krause which appeared on the cowl of his Fw 190. To try and stem the heavy night raids, Fw 190s were pressed into service to hunt the RAF bombers visually under the code-name "Wilde Sau."



Upper surface two-tone gray camouflage of Oblt Krause's aircraft. This view shows the position of the Neptune radar aerials above the wings.

Fw 190A-8, II GRUPPE JAGDGESCHWADER 4, BABENHAUSEN, GERMANY, 1945

During the last months of the war greens and grays were the favored colors. The triple bands are "Defense of the Reich" markings applied for quick identification and were applied to aircraft from 20 February 1945.

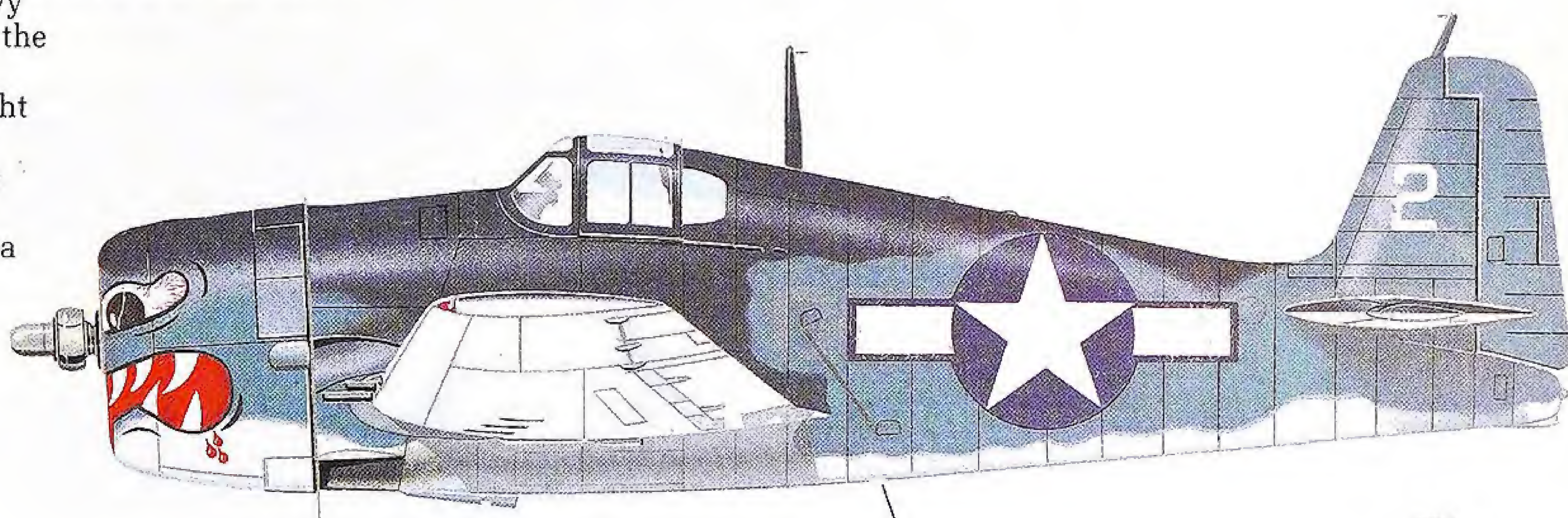


GRUMMAN HELLCAT

To the Hellcat falls the distinction of finally wresting air superiority from the Japanese Zero during the Pacific war. A rather brutish, inelegant fighter, the prototype flew on 26 June 1942 and production F6F-3s joined the Fleet early in 1943. Armament comprised six .50 caliber wing-mounted machine guns, while the later production model, the -5, had provision for underwing ordnance for the ground-attack role. Hellcats also served with the UK, French and Uruguayan navies. Production was 12,275.

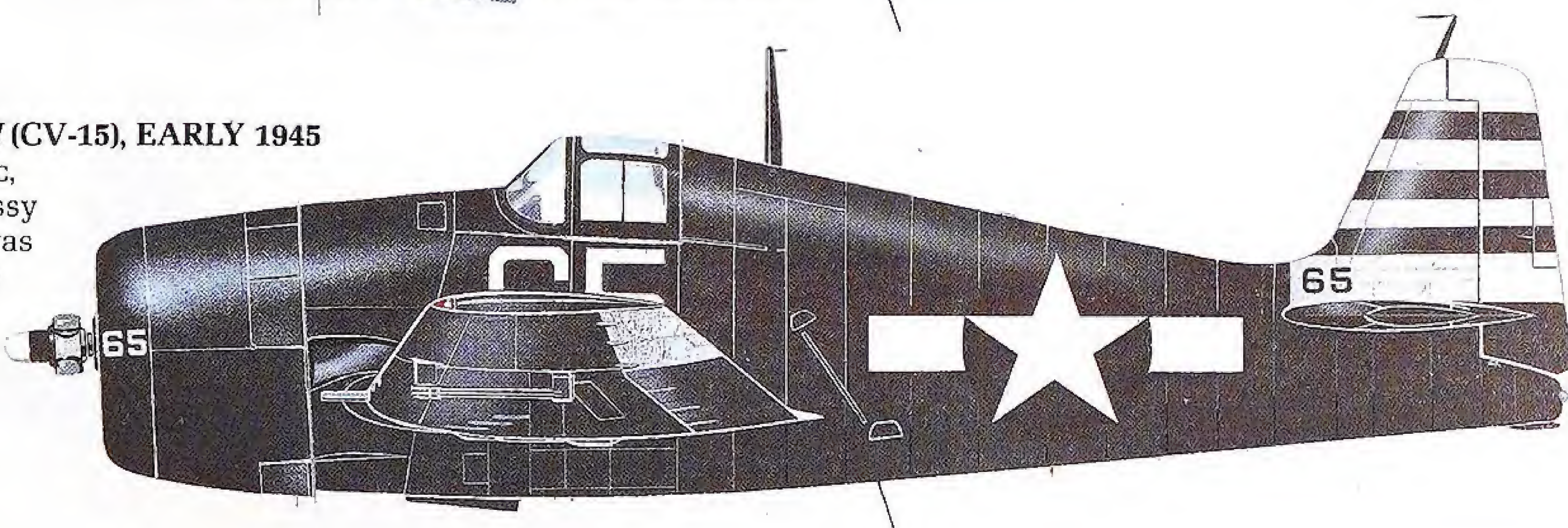
F6F-3, VF-27, US NAVY, USS *PRINCETOWN* (CVL-23), MID 1944

This was the standard counter-shaded Navy scheme comprising semi-gloss Sea Blue on the upper surfaces, matt White undersides to compromise between dark cloudy and bright blue skies when viewed from below, and Intermediate Blue on the sides to blend the top and bottom colors. This finish was retained until March 1944, when Glossy Sea Blue overall was introduced.



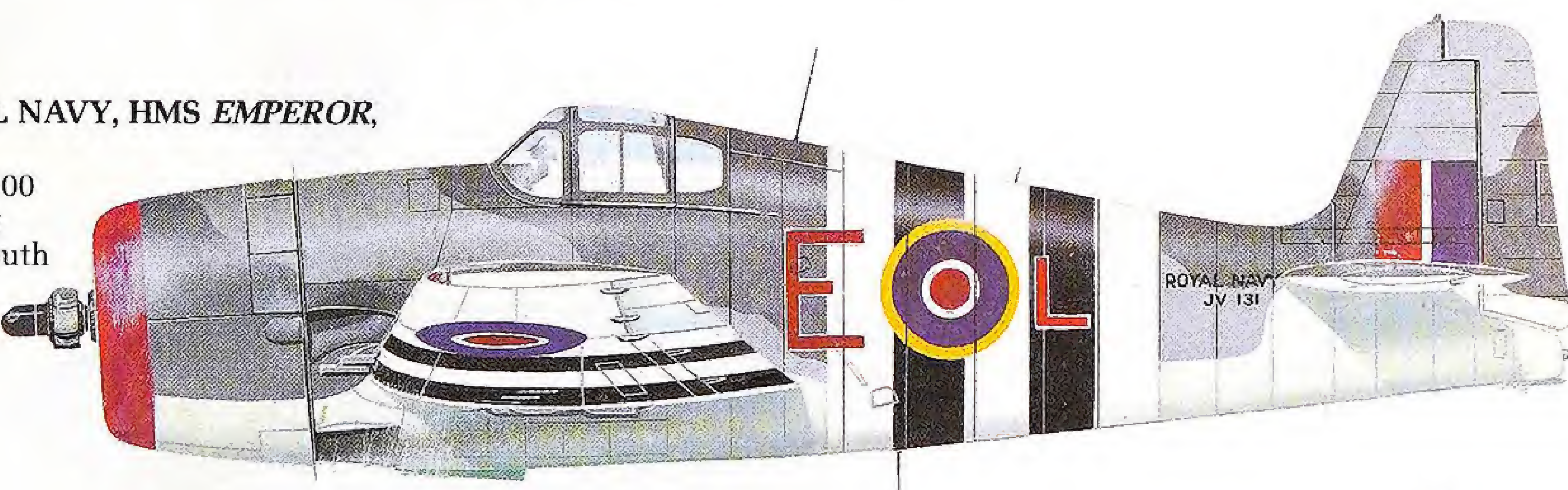
F6F-5, VF-12, US NAVY, USS *RANDOLPH* (CV-15), EARLY 1945

With Japan on the retreat across the Pacific, US Navy combat aircraft received this Glossy Sea Blue finish, and a range of markings was introduced to identify the carriers from the aircraft operated. White stripes on Hellcat 65 denoted *Randolph*, and both wing ailerons were also painted white.



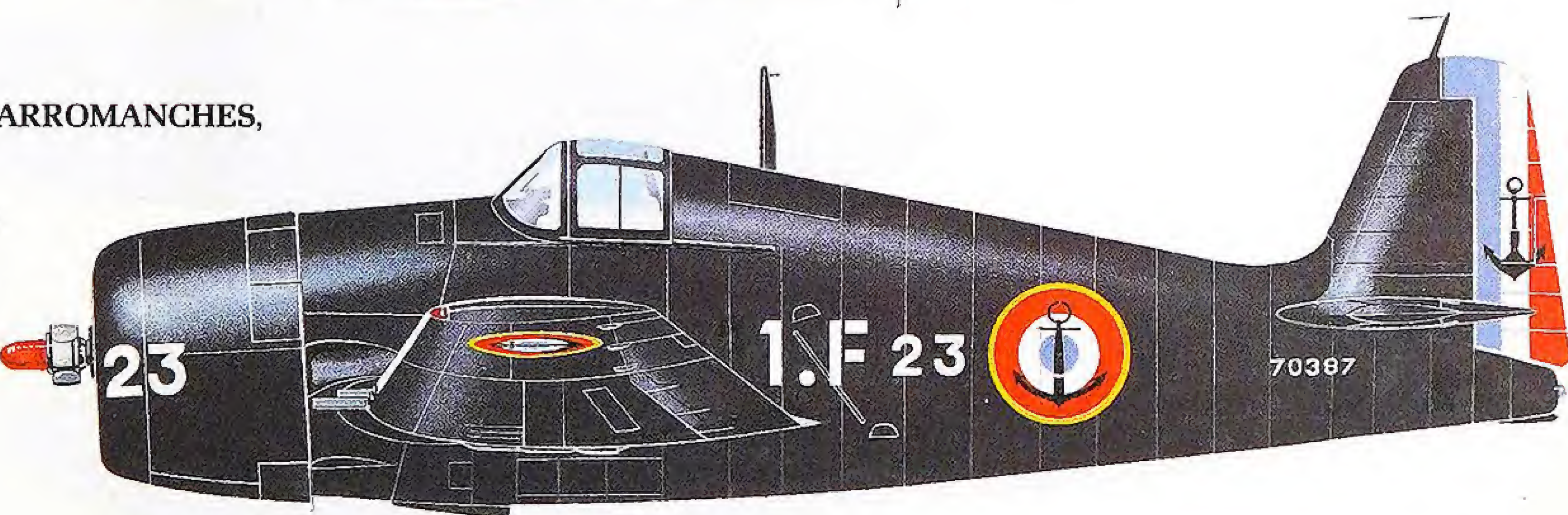
HELLCAT Mk 1, 800 SQUADRON, ROYAL NAVY, HMS *EMPEROR*, MEDITERRANEAN, MID 1944

The RN received 252 F6F-3s as Mk 1s and 800 Sqn was the first unit to equip, later taking their aircraft to cover the invasion of the south of France in August 1944. Camouflage under the invasion bands was Dark Slate Gray and Extra Dark Sea Gray with Sky undersides.



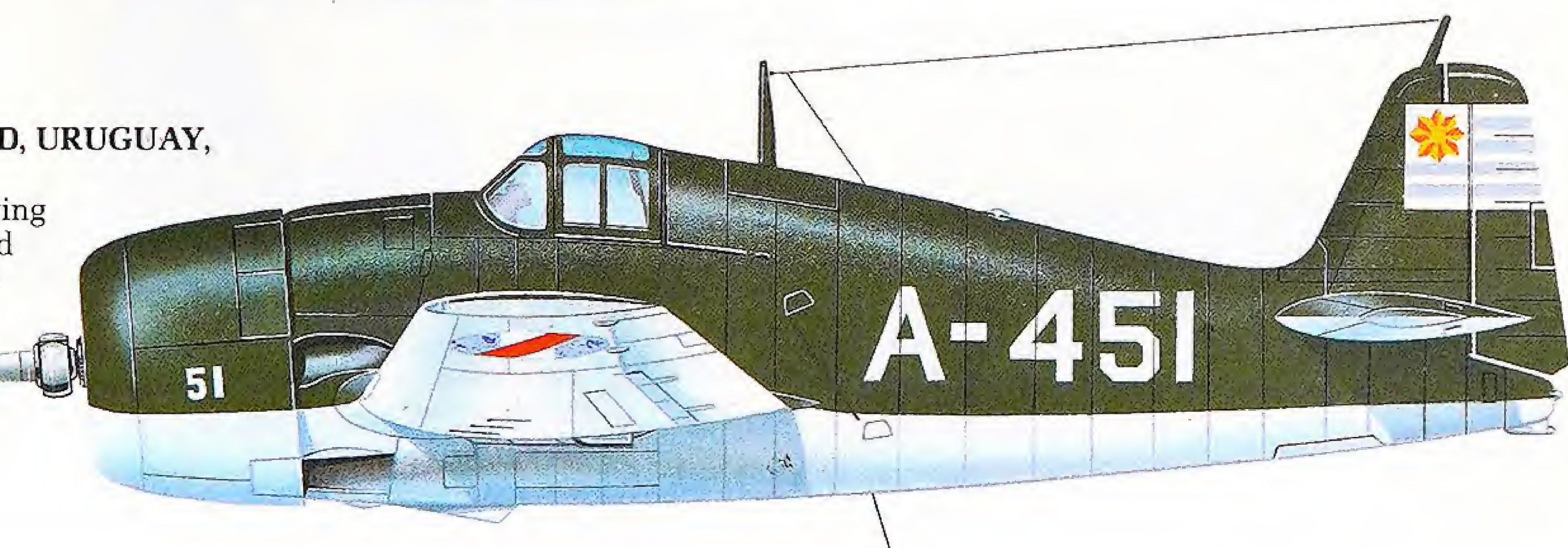
F6F-5, ESCADRILLE 1F, FRENCH NAVY, ARROMANCHES, MEDITERRANEAN, 1953

One of a number of surplus USN Hellcats transferred to the Aéronavale after the war which retained its Glossy Sea Blue finish. Under the tail is the US serial number; the aircraft-in-unit number 23 is repeated on the nose.



F6F-5, AVIACION NAVAL, ISLA LIBERTAD, URUGUAY, LATE 1950s

To repay Uruguay's help in WWII by allowing bases to be used, the United States supplied various types of war-surplus aircraft to the country's air arms including some Hellcats for the Navy. Five were still flying at the end of the 1960s, these being the last operational F6Fs in use.

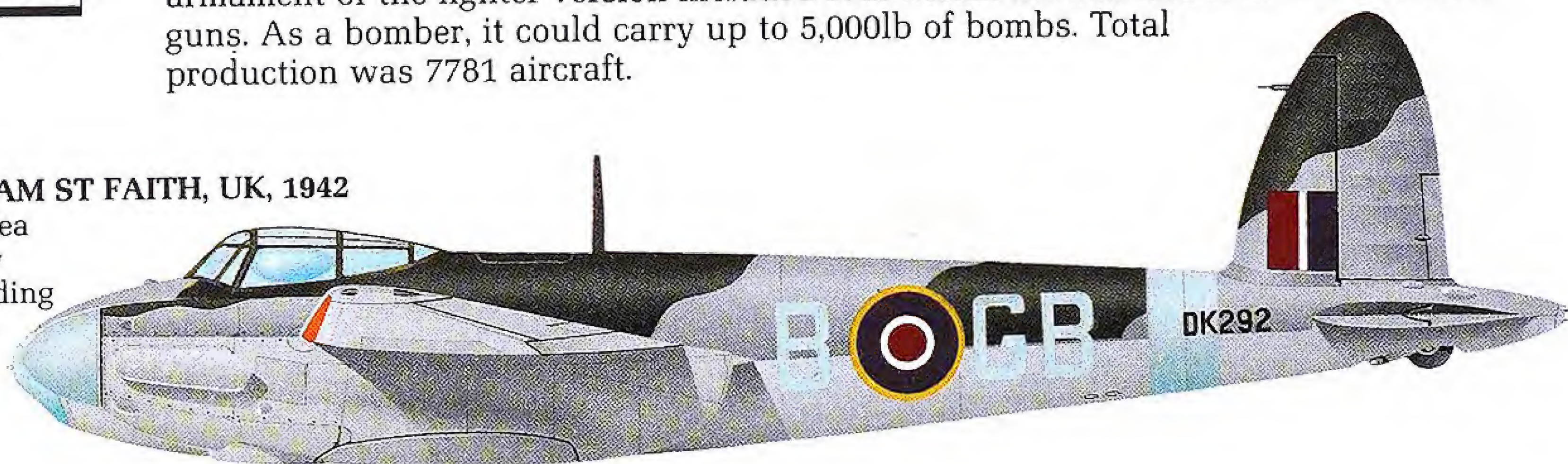


DE HAVILLAND MOSQUITO

Nicknamed the "Wooden Wonder" because of its method of construction, the Mosquito was developed initially as a fast, twin-engined, unarmed bomber, but the enormous potential of the design encouraged the development of fighter, reconnaissance and high-speed transport versions. Two Rolls-Royce Merlin engines provided the power and gave the later Mk IX a top speed of 397mph at 26,000ft. The armament of the fighter version included four 20mm cannon and four .303 machine-guns. As a bomber, it could carry up to 5,000lb of bombs. Total production was 7781 aircraft.

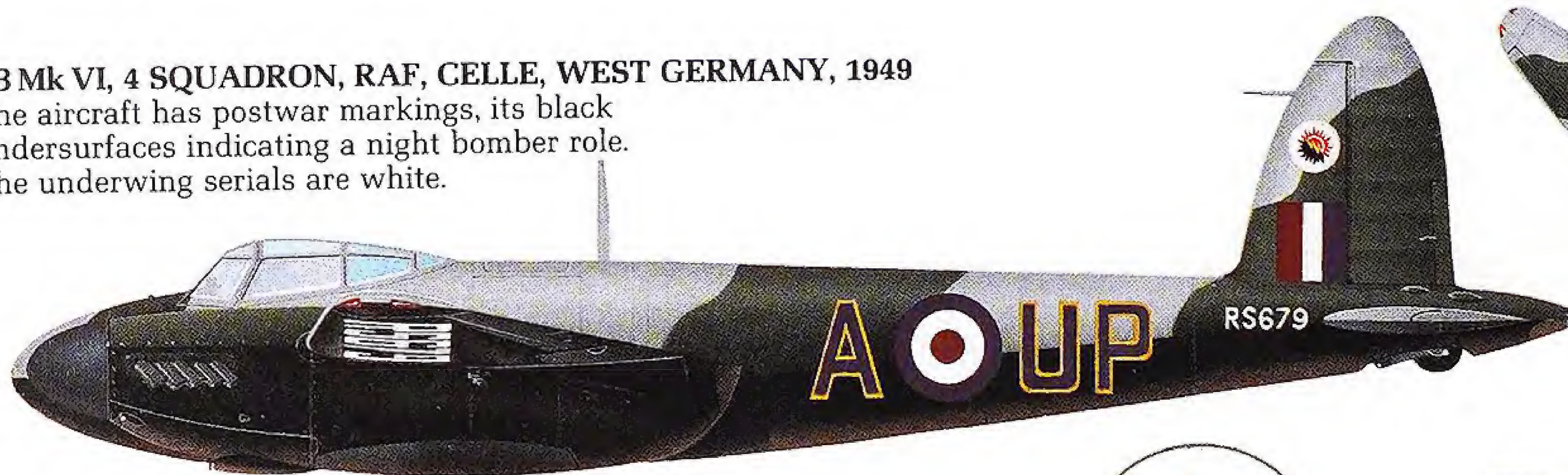
B Mk IV, 105 SQUADRON, RAF, HORSHAM ST FAITH, UK, 1942

It has Dark Green, Ocean Gray, Medium Sea Gray (undersurfaces) camouflage with Sky spinners and fuselage band. The wing leading edges are yellow for head-on identification.



FB Mk VI, 4 SQUADRON, RAF, CELLE, WEST GERMANY, 1949

The aircraft has postwar markings, its black undersurfaces indicating a night bomber role. The underwing serials are white.



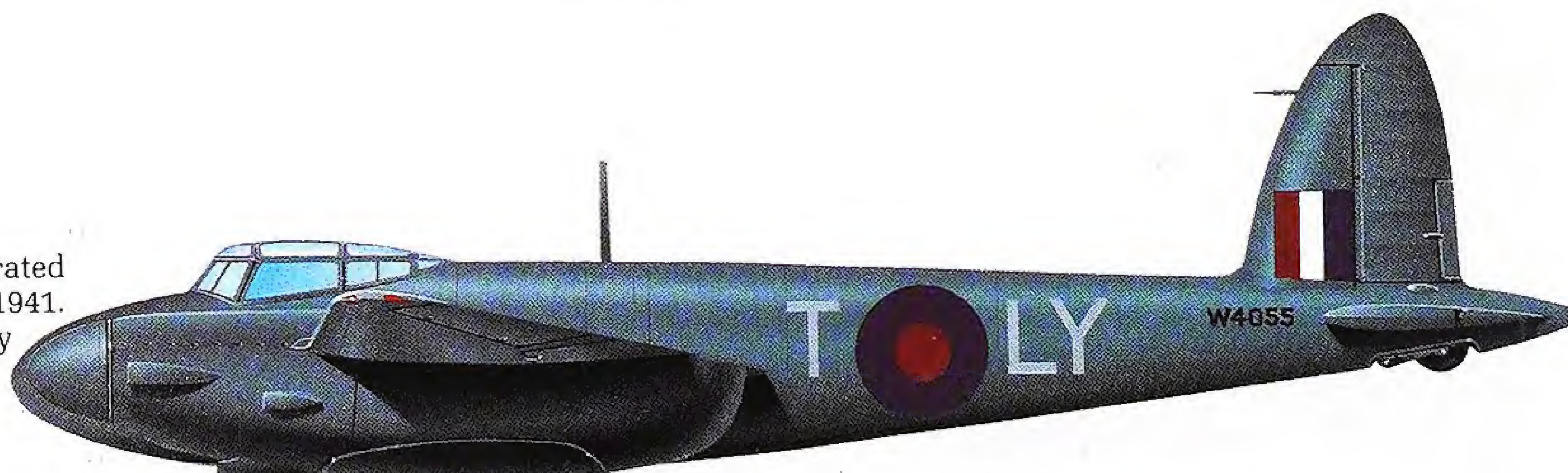
The 4 Squadron fin badge which shows the sun divided by a flash of lightning, indicating day and night operations. The lightning flash alludes to the Squadron's early wireless use.



Standard factory camouflage scheme applicable to the 4 Squadron, FB Mk VI above. The D wing roundel was introduced in June 1947.

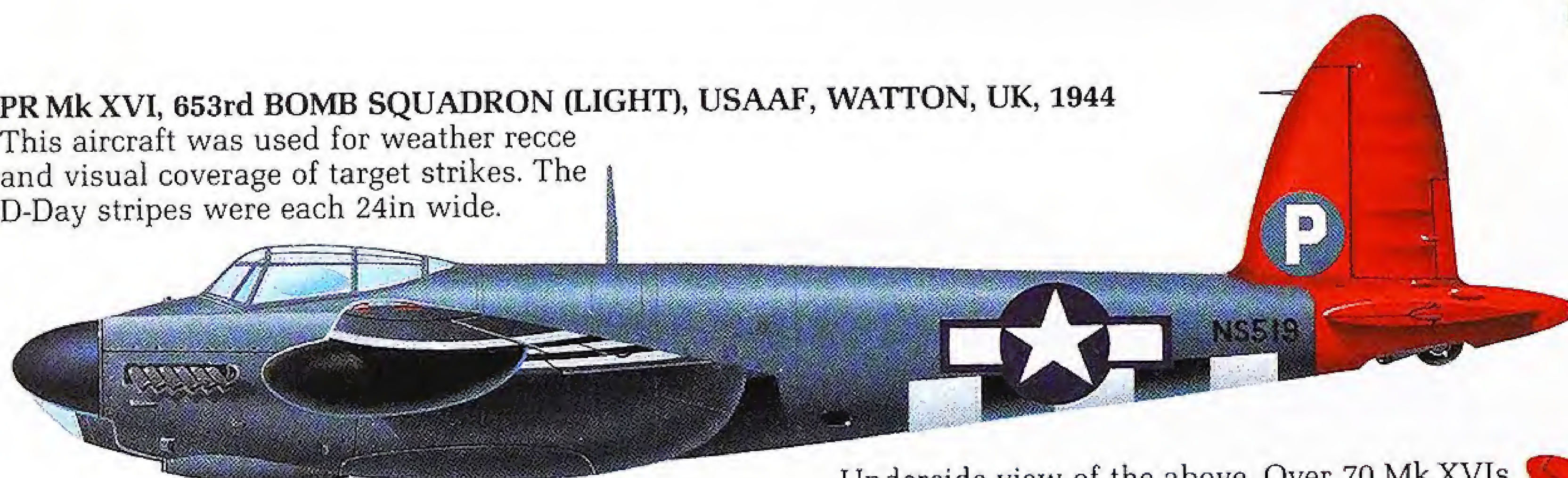
Mk I, NO. 1 PHOTOGRAPHIC RECONNAISSANCE UNIT, RAF, 1941

The sixth production aircraft, W4055 operated with No. 1 PRU until lost on 4 December 1941. It has the PRU Blue overall with Pale Gray codes and Type B roundels.

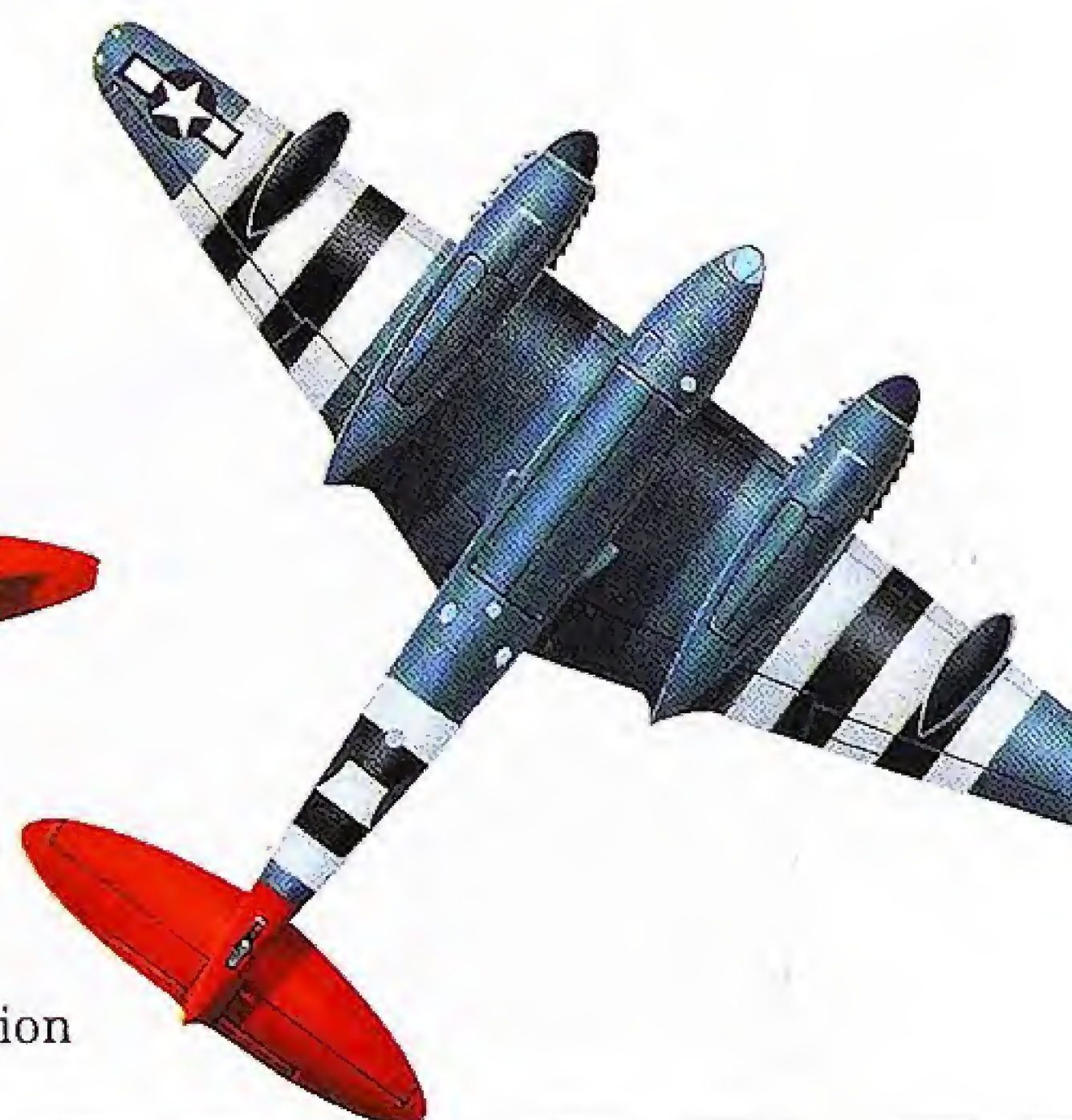


PR Mk XVI, 653rd BOMB SQUADRON (LIGHT), USAAF, WATTON, UK, 1944

This aircraft was used for weather reconnaissance and visual coverage of target strikes. The D-Day stripes were each 24in wide.



Underside view of the above. Over 70 Mk XVI's were acquired by the USAAF. It had PRU Blue overall with roundel blue spinners. The red tail surfaces were to prevent mis-identification by Allied fighters over Germany.



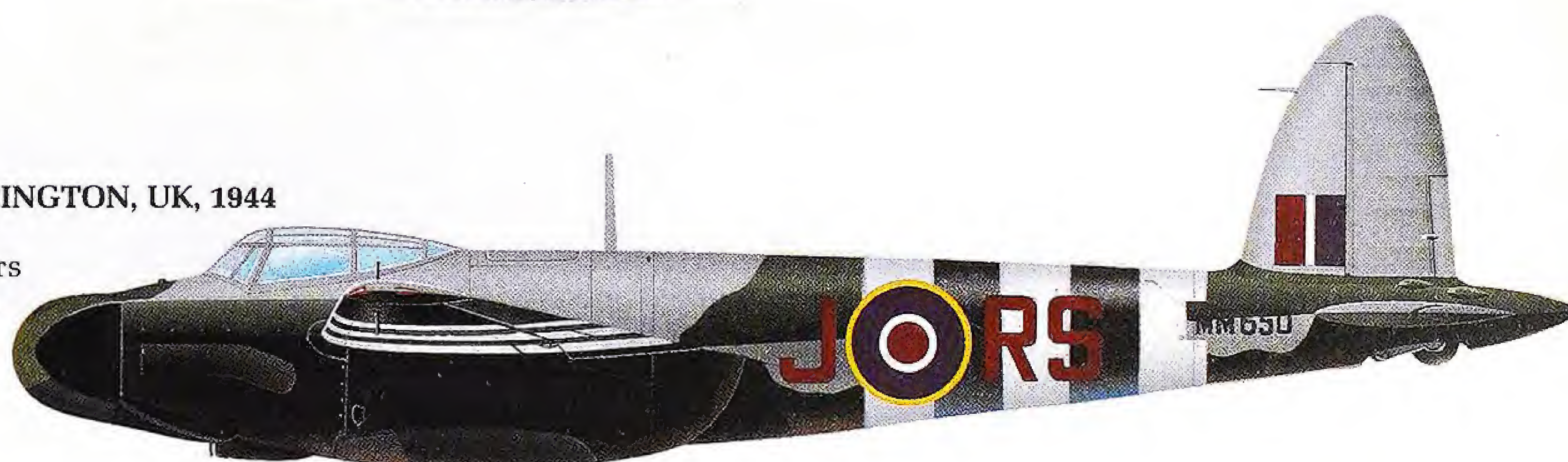
**BMk XVI, 571 SQUADRON, RAF
OAKINGTON, UK, 1944**

It operated as part of 8 (Pathfinder Force) Group Light Night Striking Force (later renamed Fast Night Striking Force). The bulged bay carried a 4,000lb bomb.



Mk XIX, 157 SQUADRON, RAF SWANNINGTON, UK, 1944

This was the first unit to operate the nightfighter Mosquito in 1941. Three years later this Mk XIX was on the strength of the squadron.



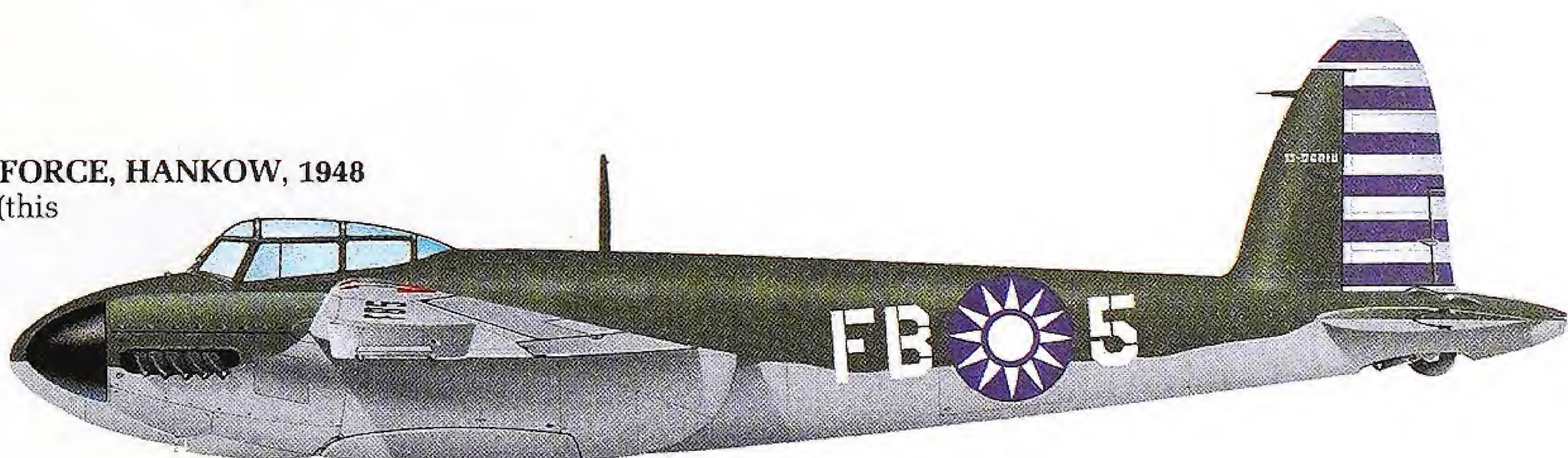
Mk T III, 58 SQUADRON, RAF BENSON, UK, 1946

High visibility was required for training aircraft and this type provides a good example of a post-war aircraft.



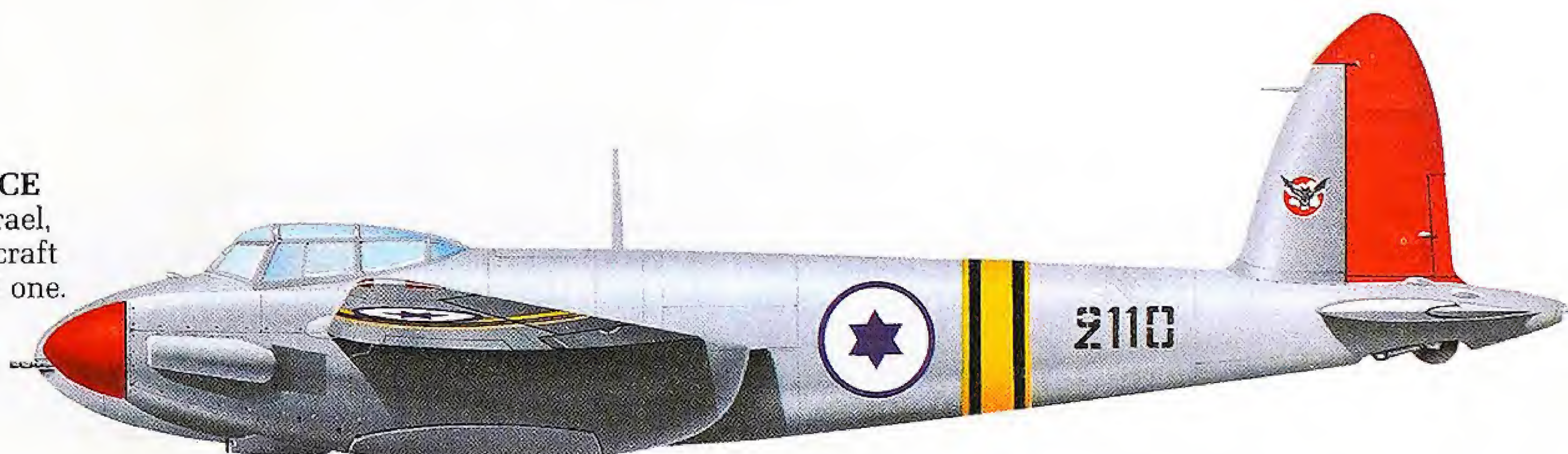
Mk XXVI, CHINESE NATIONALIST AIR FORCE, HANKOW, 1948

A lesser-known operator of the Mosquito (this one Canadian-built) was the Chinese Nationalist Air Force.



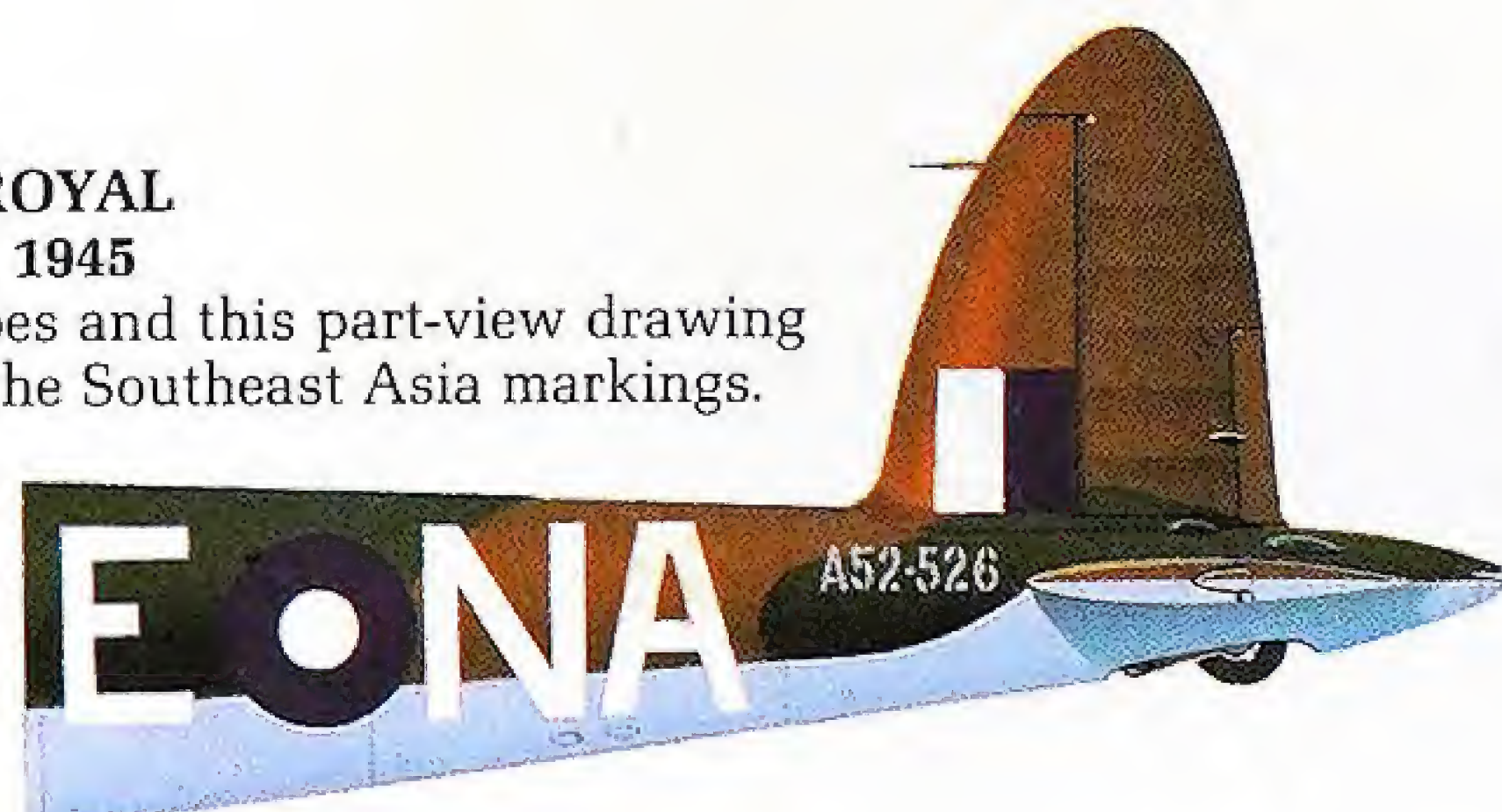
FB Mk VI, ISRAELI DEFENSE/AIR FORCE

Another post-war Mosquito user was Israel, which acquired a number of surplus aircraft from France including this silver-colored one.



**FB Mk XL, 1 SQUADRON, ROYAL
AUSTRALIAN AIR FORCE, 1945**

Australia built 212 Mosquitoes and this part-view drawing shows the coding style and the Southeast Asia markings. This machine was one of 38 built in the UK and transferred to Australia.



MARTIN B-26 MARAUDER

With its torpedo-shaped fuselage flanked by the two Pratt & Whitney Double Wasp engines, the Marauder was perhaps the sleekest bomber of World War II. However, its career was plagued by problems and at one stage the USAAF considered canceling it altogether. It survived and 5157 were built from 1941 plus a few target tug, recce and utility versions. The Marauder was withdrawn from service in 1948 and the B-26 designation passed to the Invader.

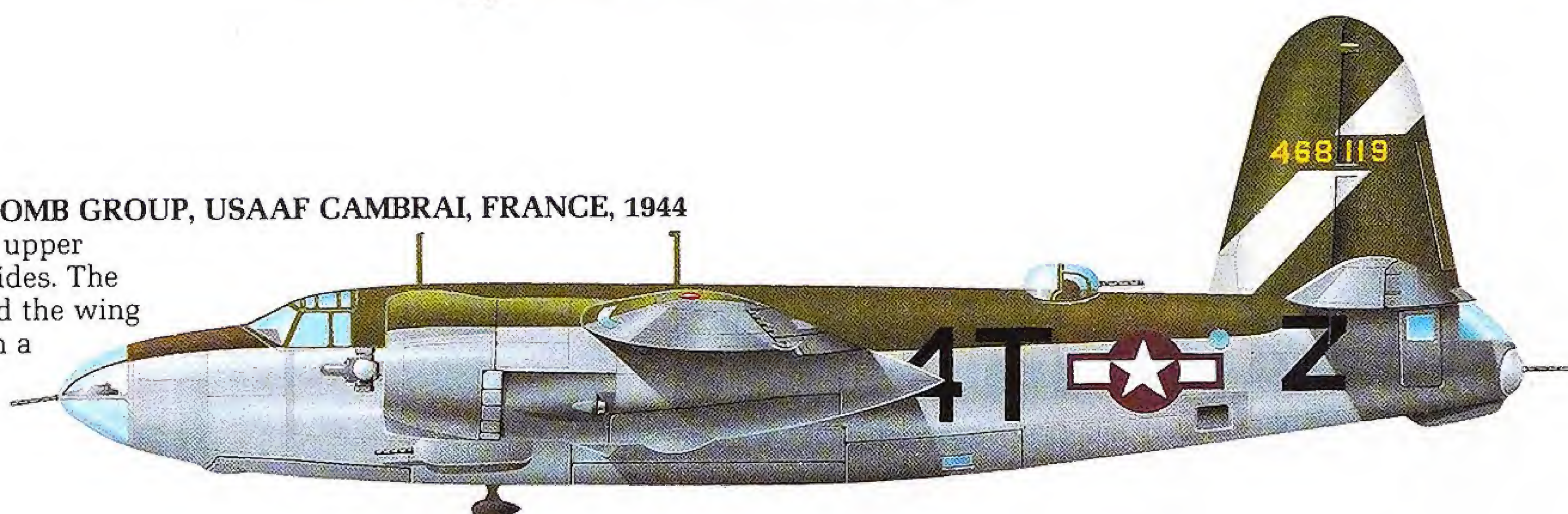
B-26B, 598th SQUADRON, 397th BOMB GROUP, 9th AIR FORCE, USAAF, DREUX, FRANCE, 1944

A Natural metal or silver finish with original Olive Drab confined to the anti-glare panel on nose and inboard engine cowlings. A 30in star on a 33in Insignia Blue disc is displayed on the fuselage. The Invasion stripes, each officially 24in wide, are almost covered by the unit code and national insignia.



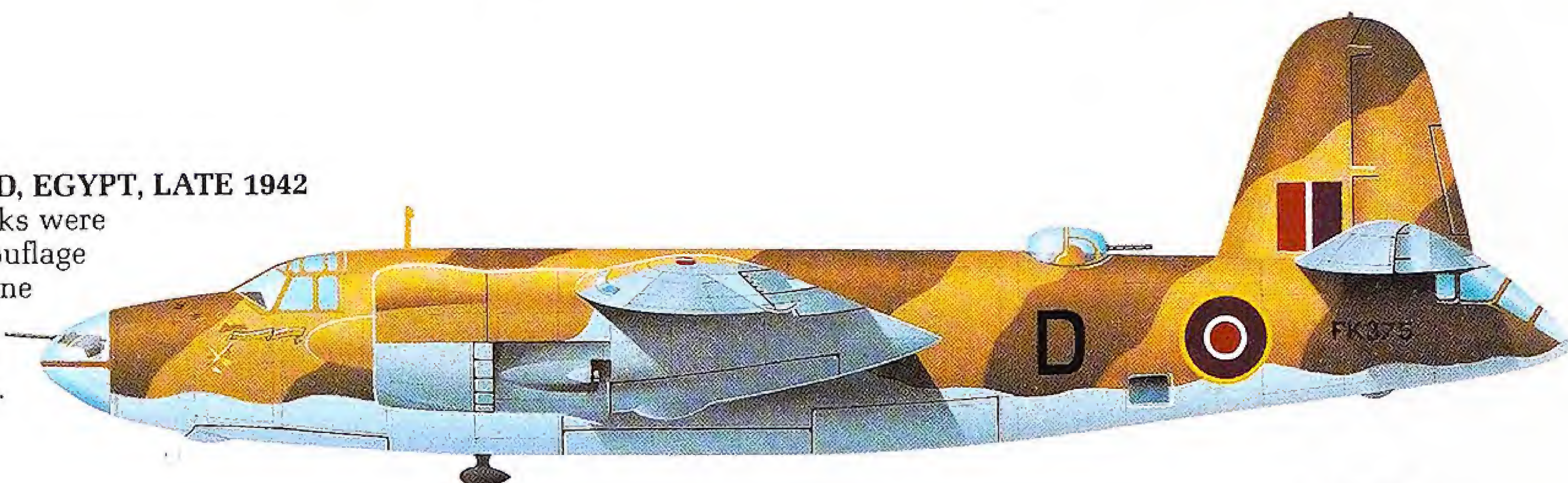
B-26G, 585th SQUADRON, 394th BOMB GROUP, USAAF CAMBRAI, FRANCE, 1944

This scheme shows Medium Green upper surfaces with natural metal undersides. The fin serial number was 12in high and the wing national insignia was a 40in star on a 44in disc.



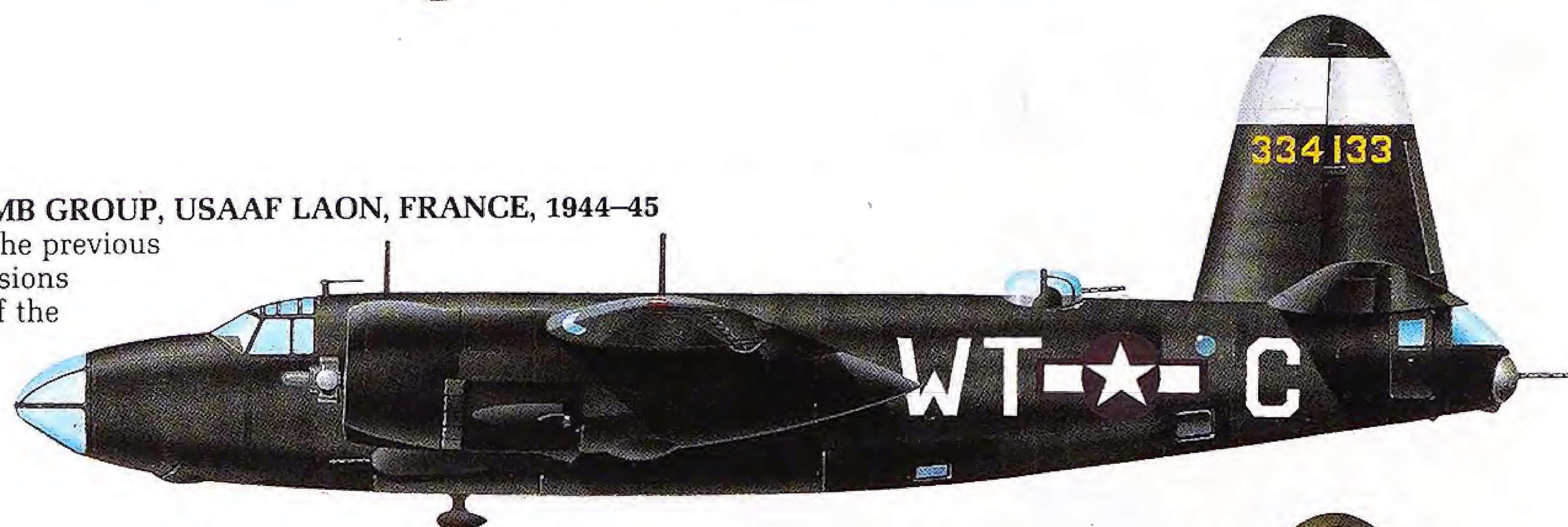
Mk IA, 14 SQUADRON, RAF FAYID, EGYPT, LATE 1942

Torpedo-armed, anti-shipping attacks were flown by this unit. The desert camouflage colors were Dark Earth, Middle Stone with Azure Blue undersides. "Dominion Revenge" was the nose art motto carried under the cockpit.



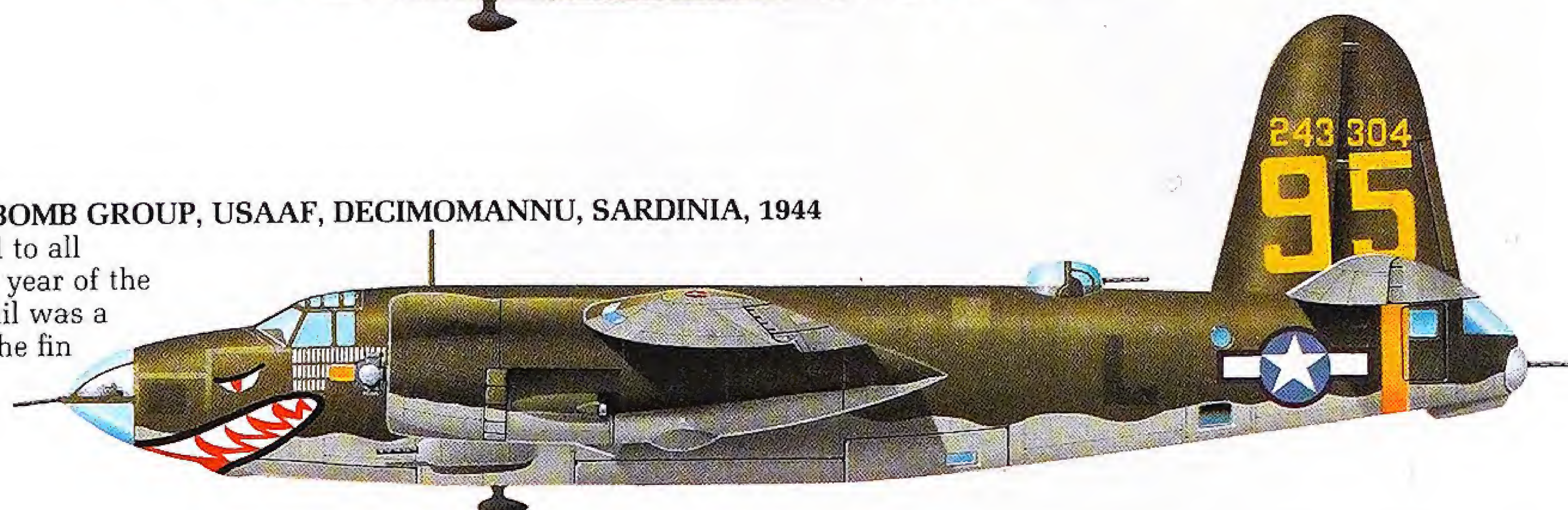
B-26G, 456th SQUADRON, 323rd BOMB GROUP, USAAF LAON, FRANCE, 1944-45

A semi-gloss Black was applied over the previous finish by USAAF for night intruder missions over the Ardennes during the Battle of the Bulge.



B-26B, 444th SQUADRON, 320th BOMB GROUP, USAAF, DECIMOMANNU, SARDINIA, 1944

Shark-nose markings were applied to all aircraft of this unit during the last year of the war. The yellow band under the tail was a group recognition marking while the fin carries a large "Battle Number" used by the Americans in the Mediterranean theater.

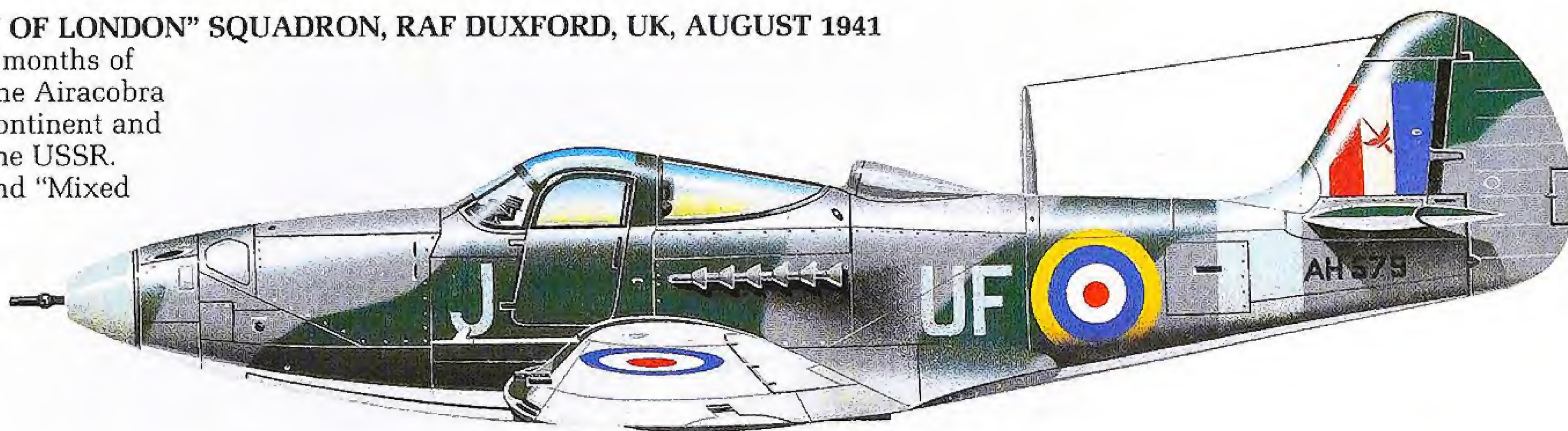


BELL P-39 AIRACOBRA

The combat potential of the P-39 was considerable: it mounted a 37mm cannon firing through the propeller hub, and with a turbo-supercharger it should have been able to outstrip and outclass all opponents. It was not to be – at least not in its early days in the Pacific, where the Zero totally outfought it. In the USSR, it was different; Soviet pilots used it as a low-level close-support fighter, and called it “Little Shaver”. Of the 9588 built, nearly half went to the Soviet Air Force.

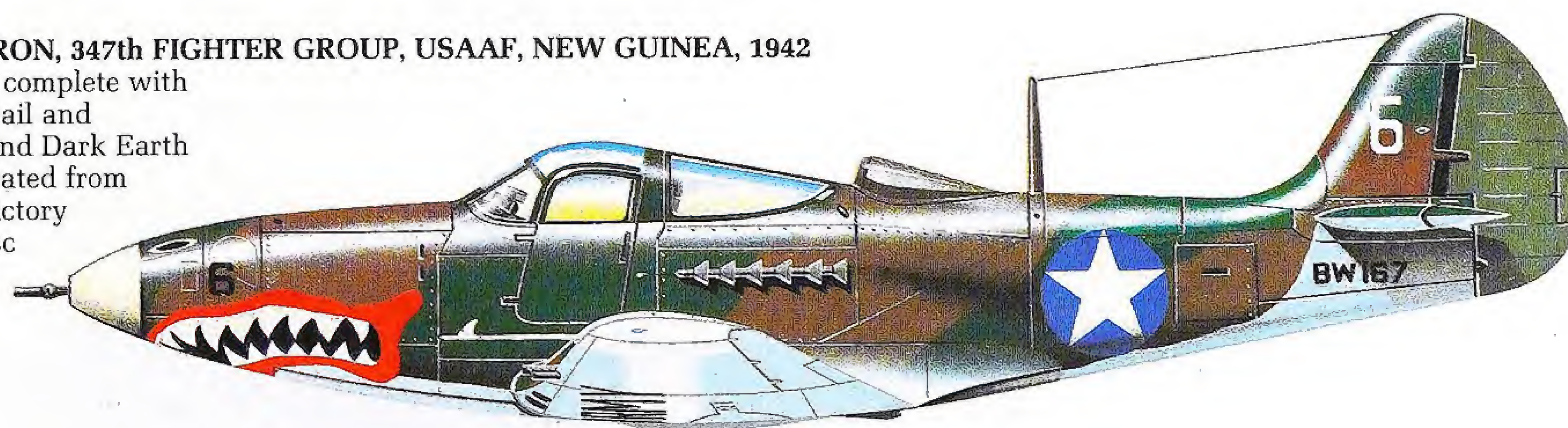
AIRACOBRA I, 601 “COUNTY OF LONDON” SQUADRON, RAF DUXFORD, UK, AUGUST 1941

After only a few disappointing months of operations, the RAF withdrew the Airacobra from fighter sweeps over the Continent and sent the remaining aircraft to the USSR. Camouflage was Dark Green and “Mixed Gray”, with Medium Sea Gray undersides. In the white of the fin flash is the 601 Sqn sword motif.



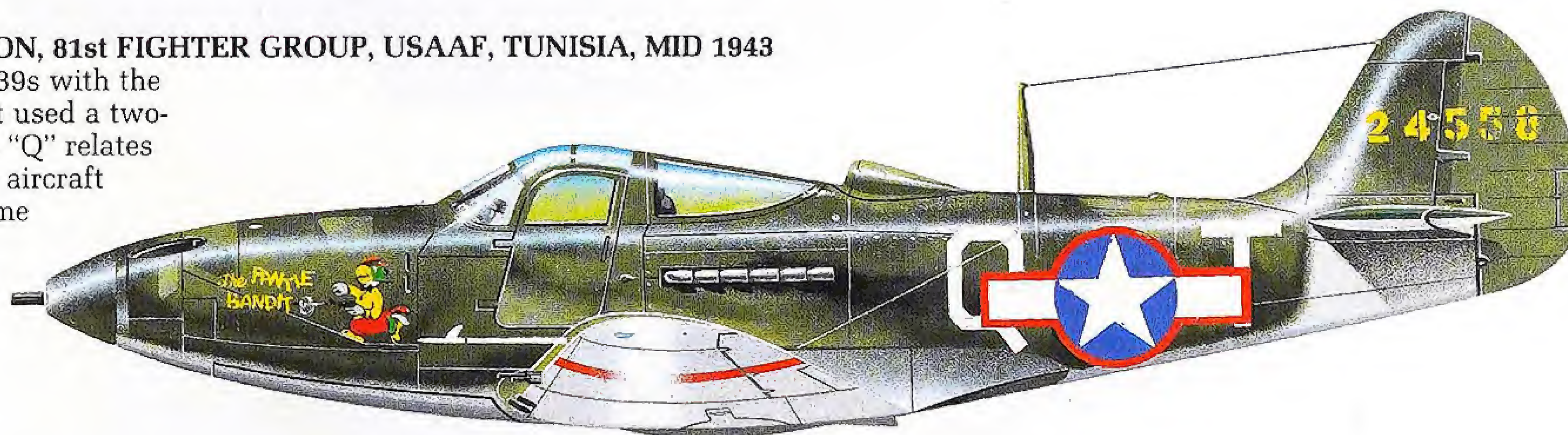
P-400, 67th FIGHTER SQUADRON, 347th FIGHTER GROUP, USAAF, NEW GUINEA, 1942

An ex-British ordered example complete with black BW167 serial under the tail and retaining the RAF Dark Green and Dark Earth camouflage. This unit also operated from Guadalcanal, scoring its first victory on 24 August 1942. The red disc in the center of the star was probably removed about this time.



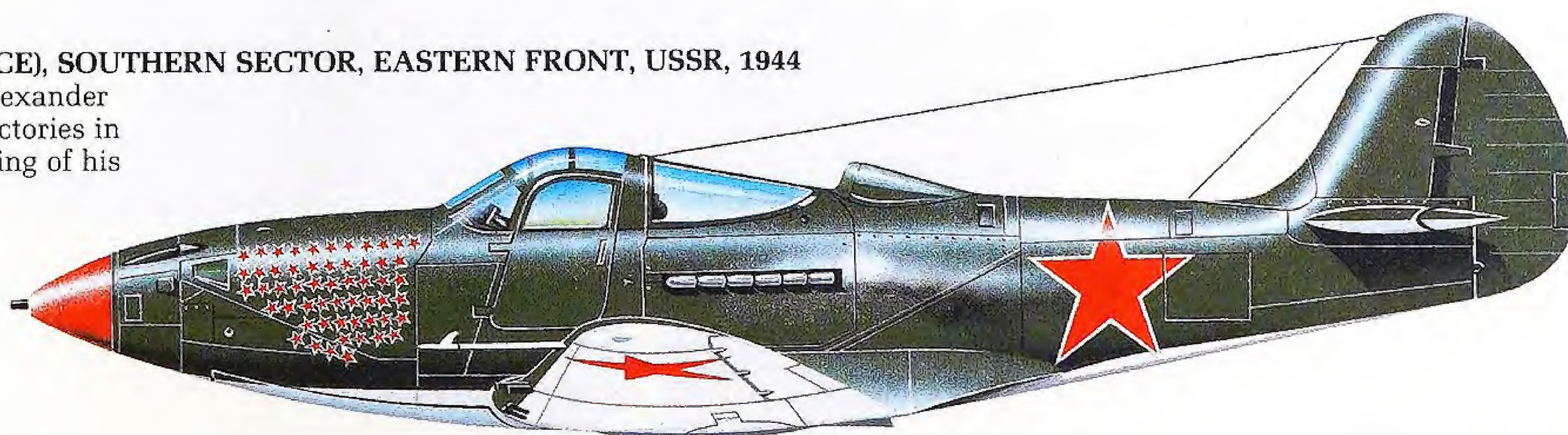
P-39L, 93rd FIGHTER SQUADRON, 81st FIGHTER GROUP, USAAF, TUNISIA, MID 1943

One of only two Groups to fly P-39s with the 12th AF in North Africa, the 81st used a two-letter code to identify its aircraft. “Q” relates to the squadron, while “T” is the aircraft within the squadron. Color scheme was Olive Drab and Neutral Gray.



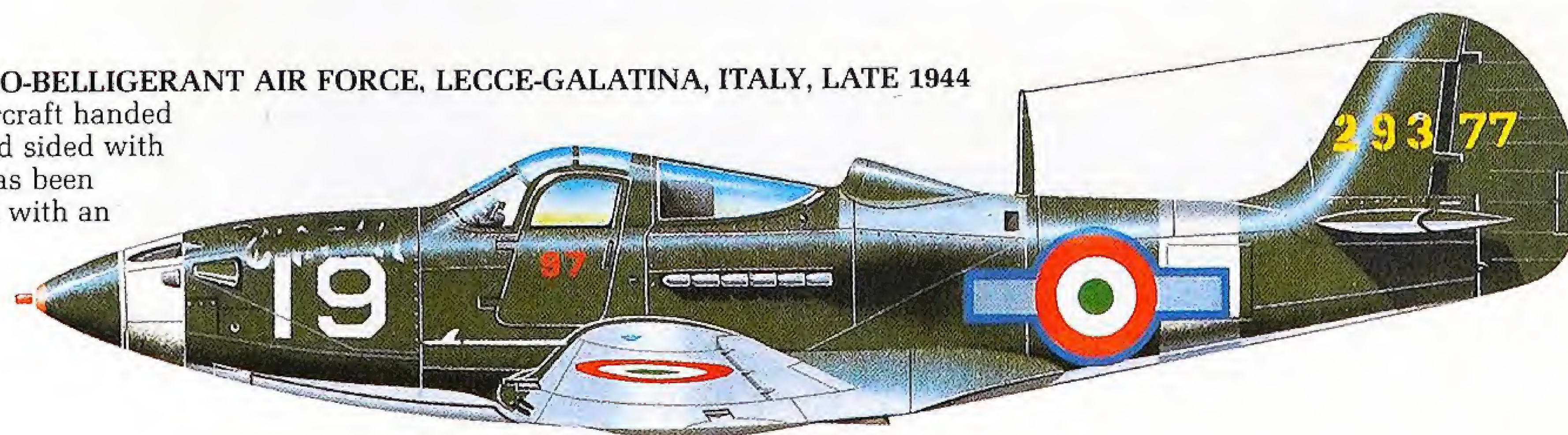
P-39Q, V-VS (SOVIET AIR FORCE), SOUTHERN SECTOR, EASTERN FRONT, USSR, 1944

Aircraft of Russian ace Major Alexander Pokryshkin, who recorded his victories in small red stars on the nose cowl of his aircraft. A total of 55 is shown.



P-39N, 4° STORMO, ITALIAN CO-BELLIGERANT AIR FORCE, LECCE-GALATINA, ITALY, LATE 1944

One of a number of ex-USAAF aircraft handed over to the Italian forces that had sided with the Allies. The Italian roundel has been painted over the old US insignia with an additional Dark Blue outline.

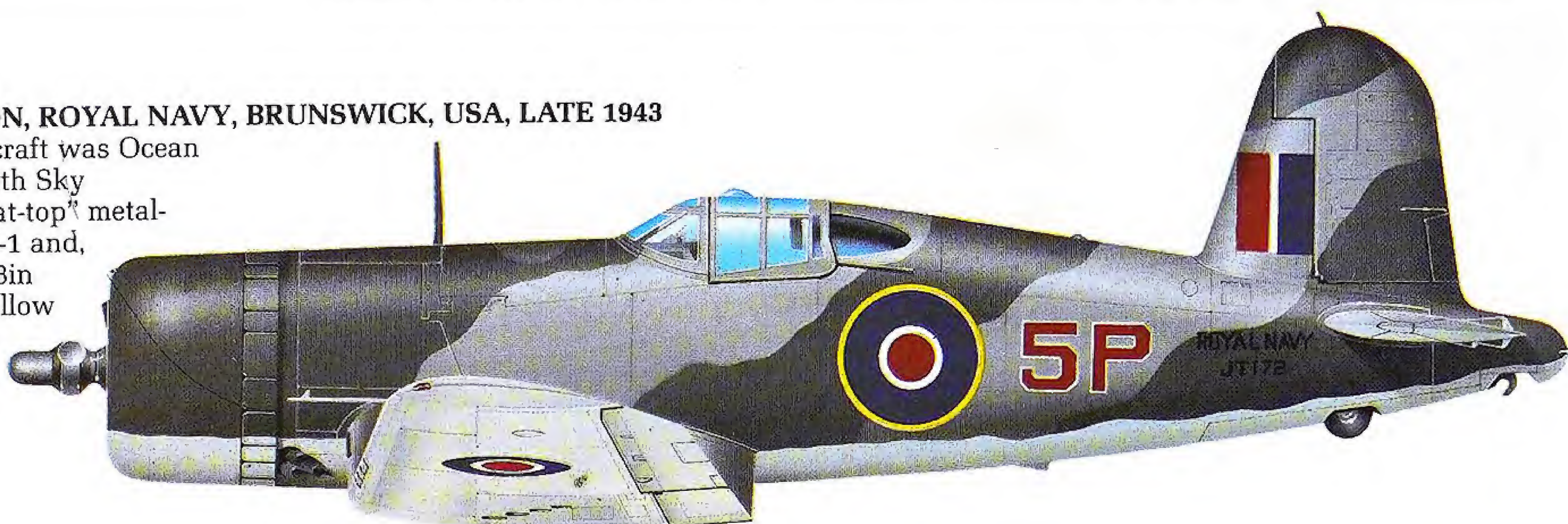


VOUGHT F4U CORSAIR

To the Japanese it was "Whistling Death," to others "Bent-wing Bird;" but, whatever its sobriquet, the Corsair was the most important naval fighter-bomber of World War II. From first flight in May 1940 to the final F4U-7 completed in January 1953, 12581 Corsairs were built. Its early career was plagued with problems and only when these were resolved in mid 1944 did the type begin carrier operations. However, the Marines had begun flying F4U-1s from land bases in February 1943 and started to notch up combat successes which were to continue for the rest of the war and on into Korea.

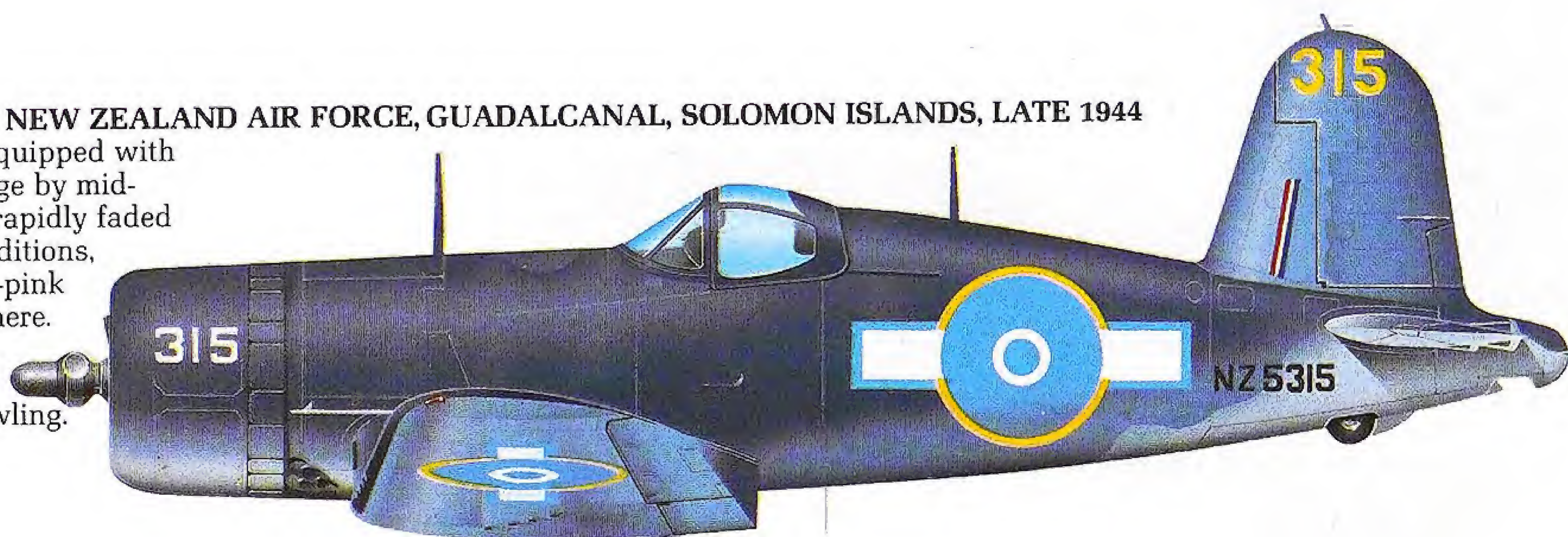
CORSAIR I, 1835 SQUADRON, ROYAL NAVY, BRUNSWICK, USA, LATE 1943

Camouflage for this early aircraft was Ocean Gray and Dark Slate Gray with Sky undersides. JT172 has the "flat-top" metal-reinforced canopy of the F4U-1 and, not immediately obvious, an 8in reduction of the wing tip to allow stowage in the hanger decks of escort carriers.



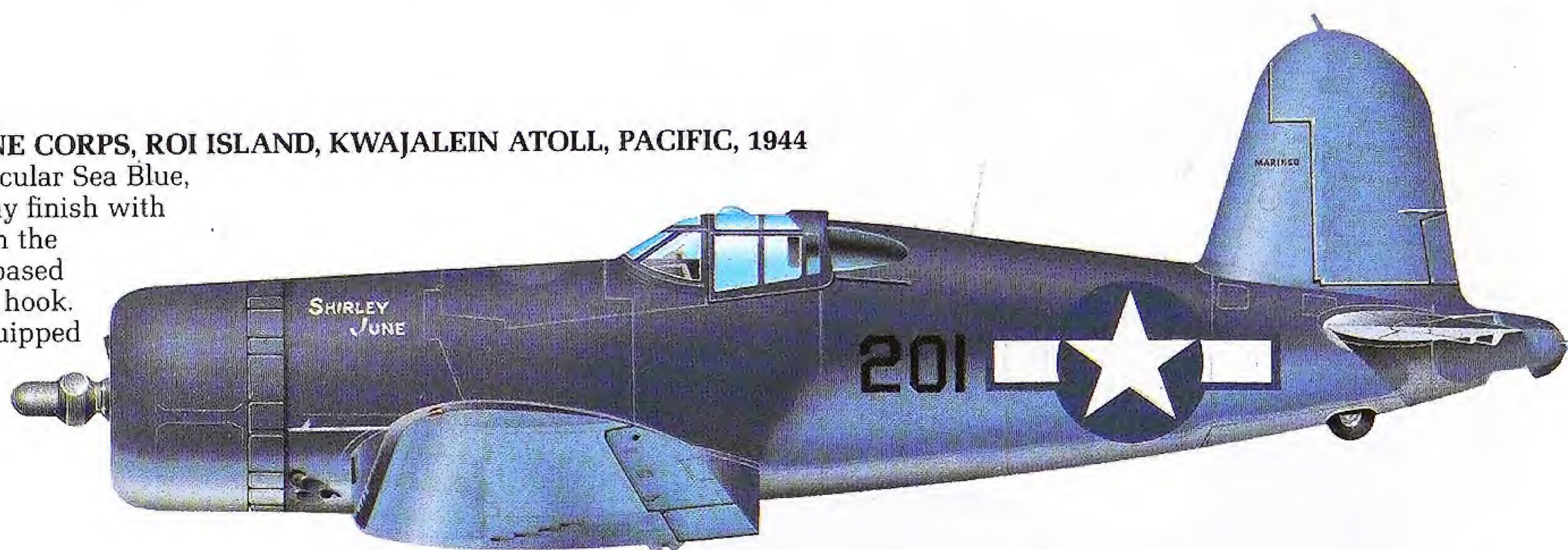
F4U-1A, 17 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, GUADALCANAL, SOLOMON ISLANDS, LATE 1944

Thirteen RNZAF squadrons were equipped with Corsairs, 424 being taken on charge by mid-1945. The three-color camouflage rapidly faded and discolored under tropical conditions, becoming a dusty pink or grayish-pink compared with the finish shown here. The last three numbers of the NZ serial were repeated in yellow on the fin tip and in white on the cowling.



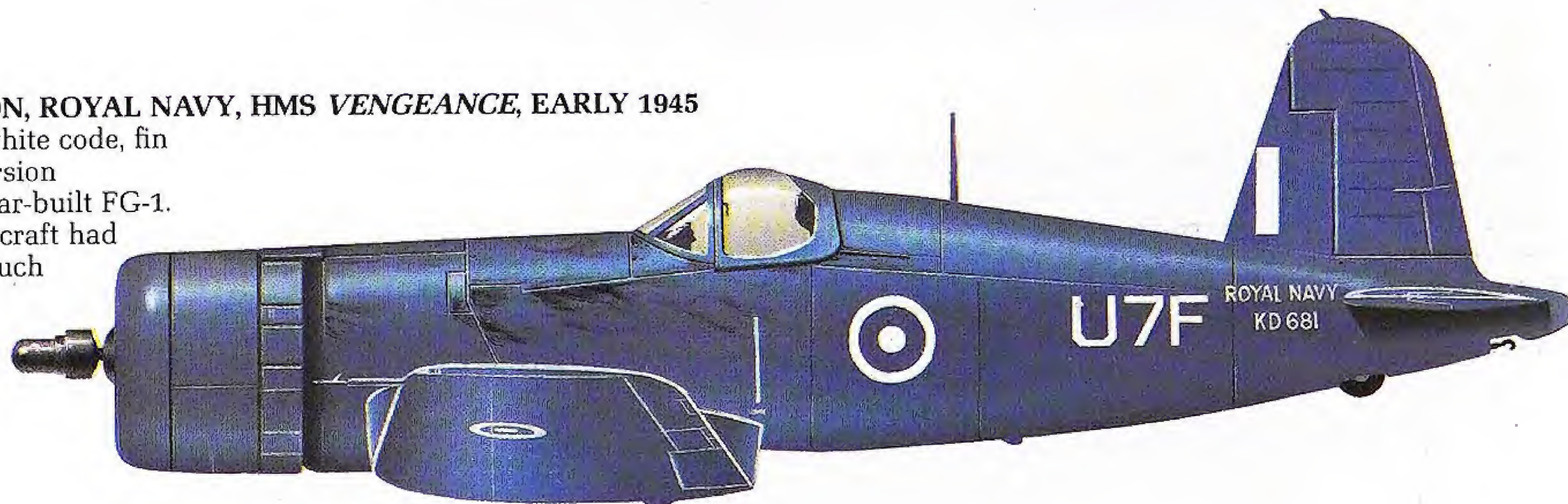
F4U-2, VMF(N)-532, US MARINE CORPS, ROI ISLAND, KWAJALEIN ATOLL, PACIFIC, 1944

A "flat-top" sports the Non-Specular Sea Blue, Intermediate Blue and Gull Gray finish with the folding outer-wing panels in the Intermediate Blue. These land-based aircraft dispensed with the tail hook. Night-fighting Corsairs also equipped VF(N)-75 on New Georgia in the Solomons and VF(N)-101 aboard the USS Essex.



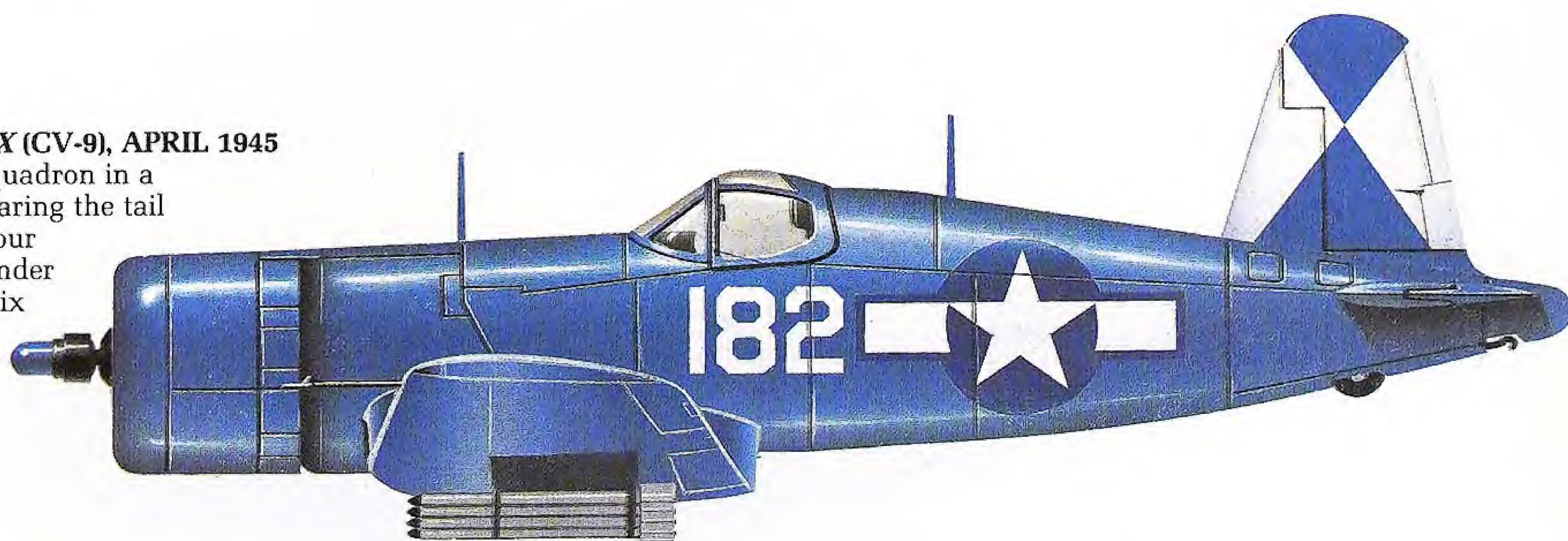
CORSAIR IV, 1850 SQUADRON, ROYAL NAVY, HMS VENGEANCE, EARLY 1945

Glossy Sea Blue overall with white code, fin flash and roundels. This RN version corresponded with the Goodyear-built FG-1. Unlike early Corsairs, these aircraft had blown canopies, which gave much better visibility.



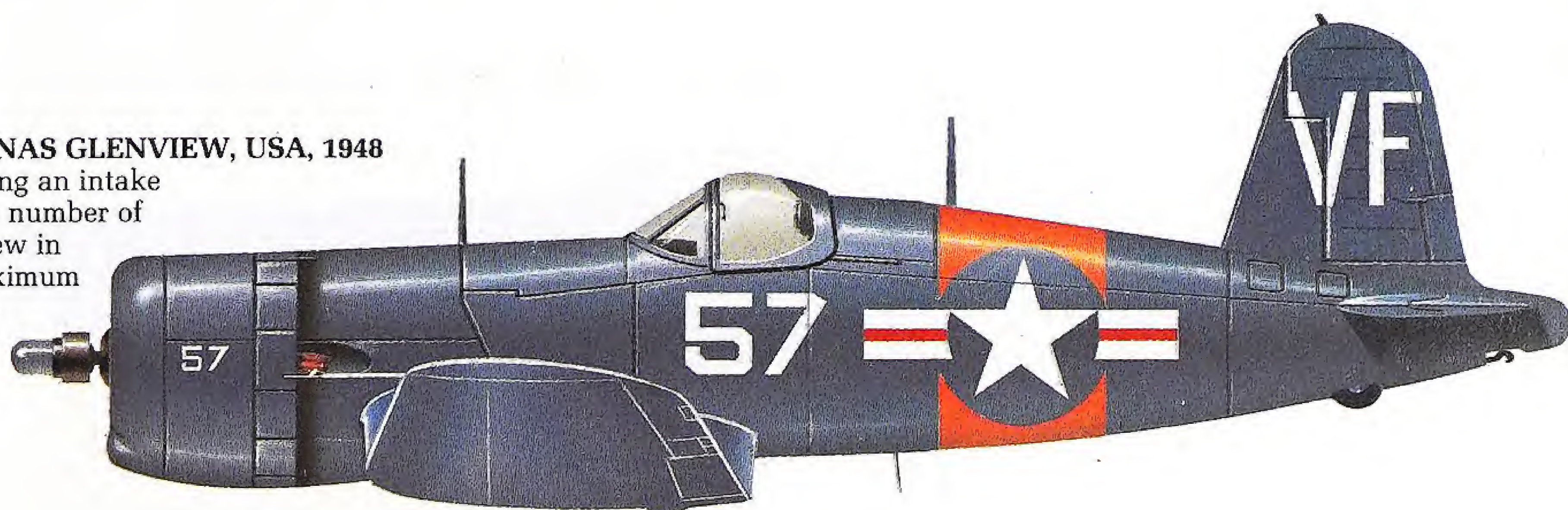
F4U-1D, US NAVY, USS *ESSEX* (CV-9), APRIL 1945

Aircraft of an unknown USN squadron in a washed-out blue finish and wearing the tail marking denoting the *Essex*. Four unguided rockets are carried under each wing supplementing the six .5in MGs in the wing.



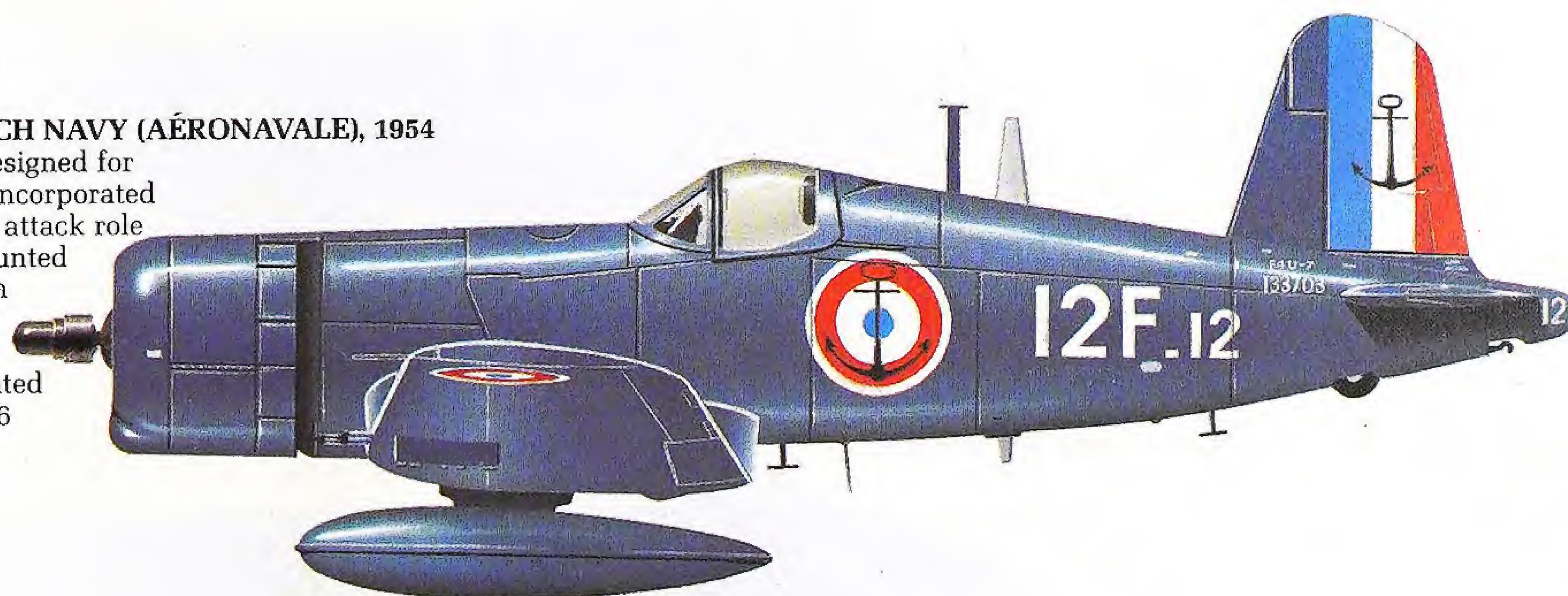
F4U-4C, US NAVY RESERVE, NAS GLENVIEW, USA, 1948

An improved engine necessitating an intake below the cowl was one of a number of changes in the -4, which first flew in April 1944. It increased the maximum speed from 417mph in the -1 to 446mph. This post-war aircraft carries a 3ft-wide orange band as background to the insignia, denoting a Reserve unit.



F4U-7, FLOTTILLE 12F, FRENCH NAVY (AÉRONAVAL), 1954

This variant was specifically designed for French use in Indo-China and incorporated extensive armor plating for the attack role as well as four 20mm wing-mounted cannon and underwing weapon pylons. Ninety-four were built, and the French used the type from its carriers and also operated attack missions during the 1956 Suez crisis.



F4U-4, FUERZA AEREA SALVADORENA, SAN MIGUEL, EL SALVADOR, 1958

A total of 24 Corsairs were supplied to the FAS between 1957 and 1959 from US stocks. These were used in the "Soccer War" with Honduras in July 1969, flying combat missions against Honduran-operated Corsairs! The Salvadorean F4Us and FG-1s were withdrawn after the short conflict and replaced by Mustangs.



PETLYAKOV PE-2

Known affectionately as *Peshka*, this attractive three-seat warplane entered service with the Soviet Air Force towards the end of 1940 and quantities were available to help repel the German invasion from late 1941. In addition to the light bomber role the Pe-2 existed as a reconnaissance (-2R) and dual-control trainer (-2U). Of the 11,427 built, the most widely used was the -2FT (Frontovoye Trebovaniye or "Front-line Request"), which incorporated modifications demanded by the front-line crews.

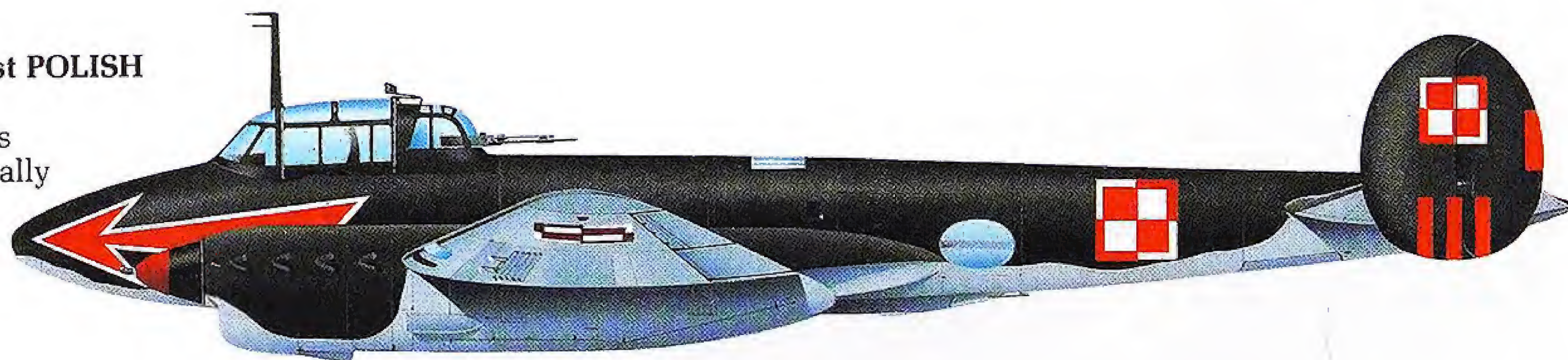
Pe-2FT, 34 GUARDS BOMBER AVIATION REGIMENT, POLAND, AUGUST 1945

Many wartime aircraft, and not only Russian, were paid for by members of the civilian population. This aircraft was donated by the people of Leningrad, the inscription reads "Leningrad-Königsberg."



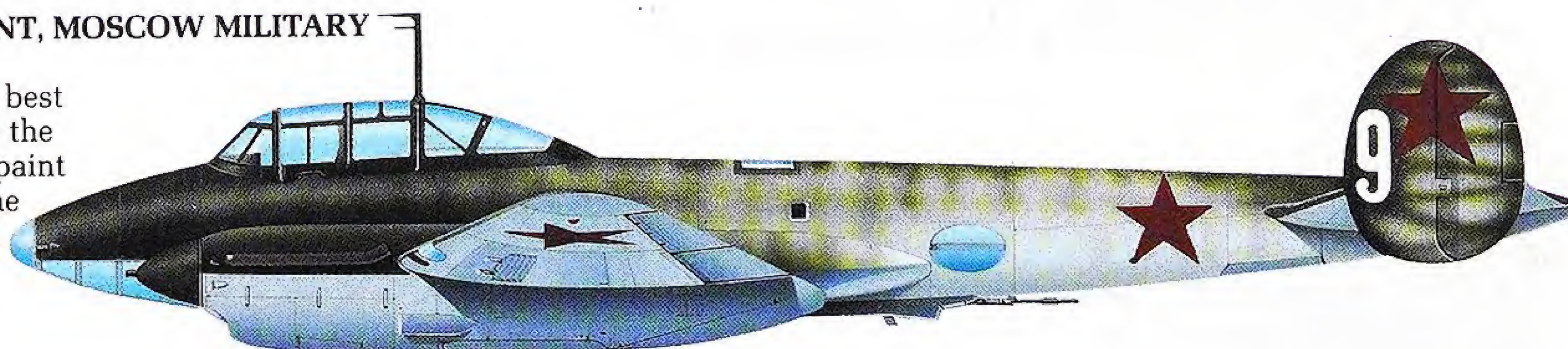
Pe-2FT, 3 DIVE BOMBER REGIMENT, 1st POLISH COMPOSITE AIR CORPS, 1945

This was one of three P3-2-equipped units operational in the summer of 1945. Naturally red was a favored color, in most forms of insignia among Eastern Bloc air forces.



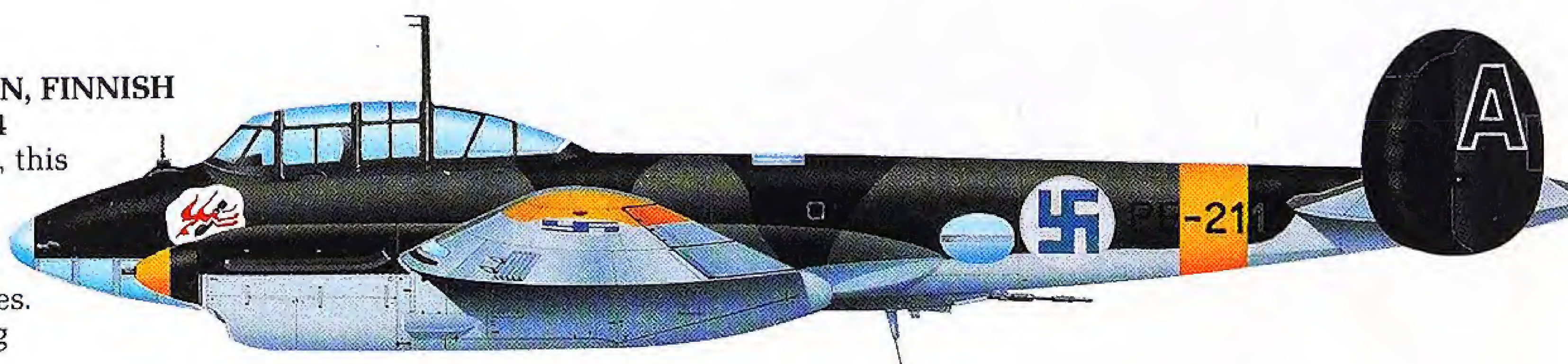
Pe-2, 46 BOMBER AVIATION REGIMENT, MOSCOW MILITARY DISTRICT, USSR, WINTER 1941

Like the Germans, the Soviet AF did its best to conceal its dark-painted aircraft once the snows came. A liberal coating of white paint was applied over all top surfaces, but the effect of airflow and general operational wear and tear soon wore down the covering to give this unkempt appearance.



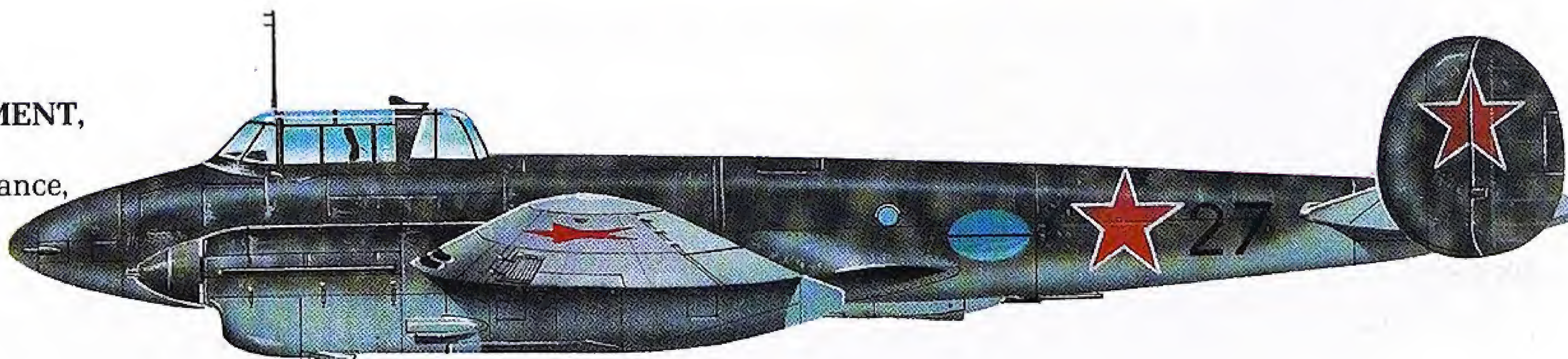
Pe-2, 2 FLIGHT, 48 BOMBER SQUADRON, FINNISH AIR FORCE, ONTTOLA, FINLAND, 1944

Captured by the German Army in Russia, this aircraft was one of six passed on to the Finns in December 1941; another was obtained in 1944. Camouflage was green and black with light blue undersides. The nose badge showed a red devil riding a black bomb.



Pe-2FT, 73rd BOMBER AVIATION REGIMENT, RED BANNER BALTIC FLEET, 1942

This aircraft has a distinctly worn appearance, indicative of the intensive operations flown by these light bombers at this stage of the war. It was operating in the Leningrad area at the time.

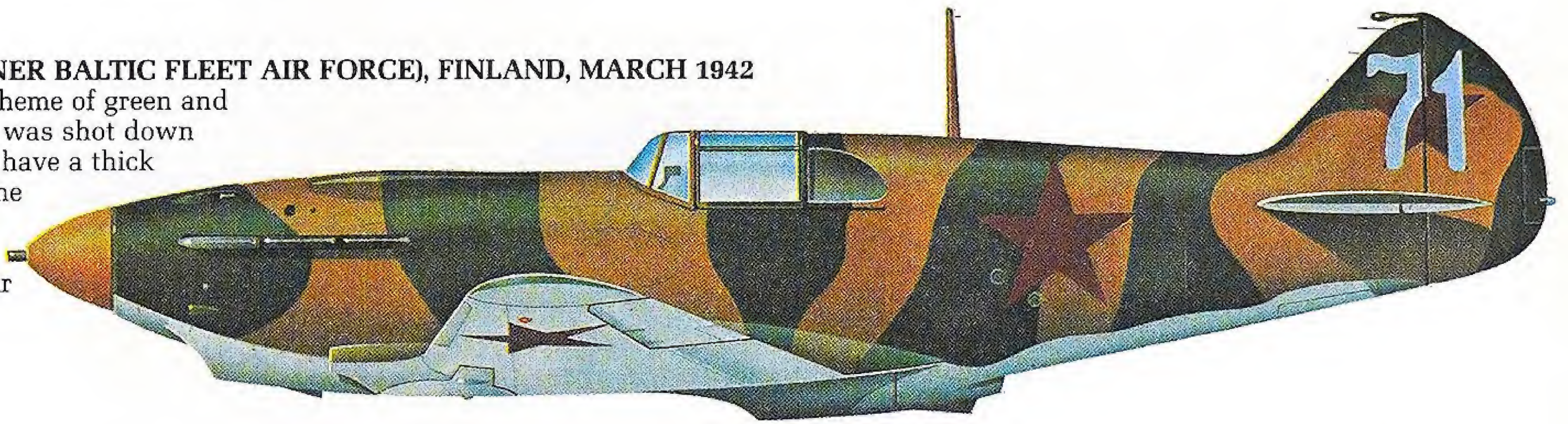


LAGG-3

A design from the combined team of Lavochkin, Gorbunov and Gudkov, the LaGG-3 had just entered production when Germany invaded the Soviet Union in 1941. Not the easiest aircraft to fly, and overweight despite its wooden construction, the aircraft was put into mass production as a stop-gap, medium to low altitude tactical fighter to modernize V-VS regiments. At one stage 12 LaGG-3s were being completed daily; a total of 6528 had been built when production ceased in the autumn of 1942.

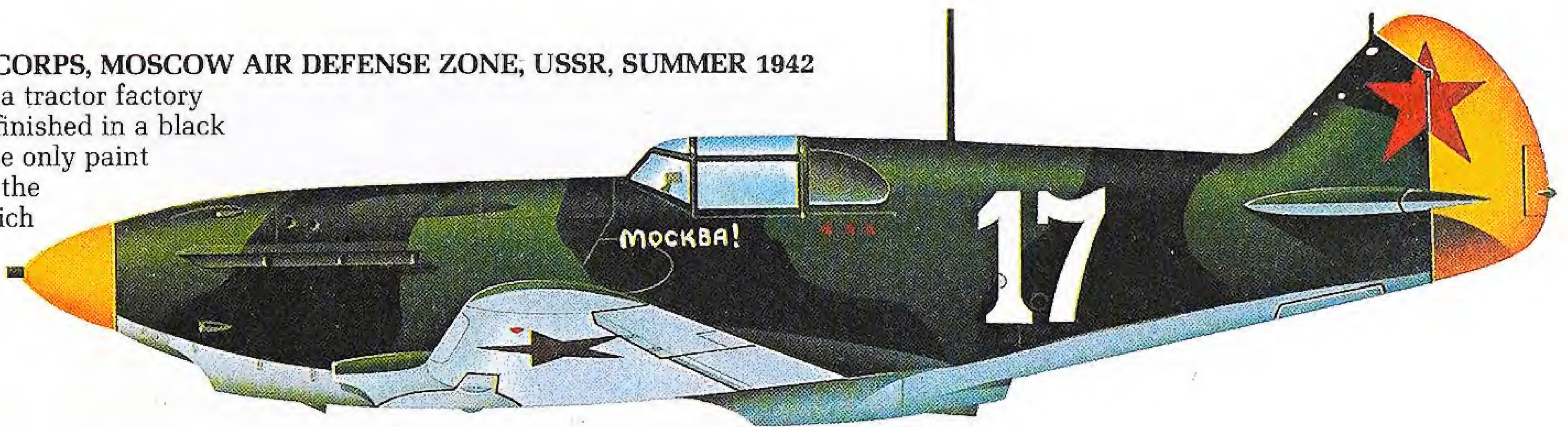
LaGG-3, V-VS (RED BANNER BALTIC FLEET AIR FORCE), FINLAND, MARCH 1942

Finished in a disruptive scheme of green and brown paint, this example was shot down over Finland and found to have a thick layer of polish to smooth the exterior surfaces. Three examples were later operated by the Finnish Air Force as high-speed reconnaissance aircraft.



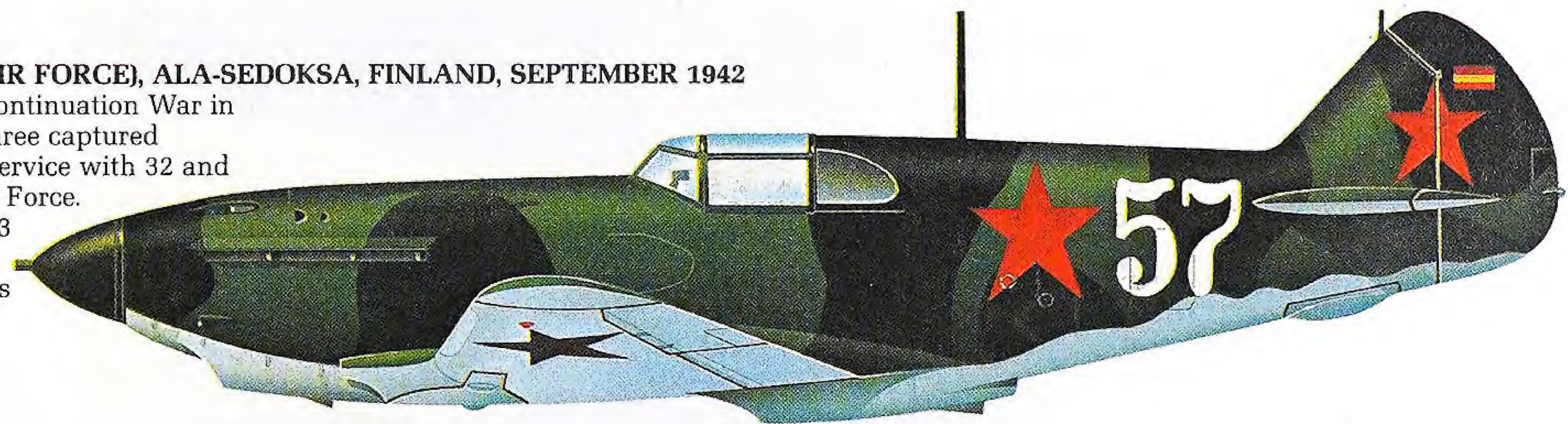
LaGG-3, 6 FIGHTER AIR CORPS, MOSCOW AIR DEFENSE ZONE, USSR, SUMMER 1942

This airframe was built at a tractor factory and when completed was finished in a black and green scheme using the only paint available – that applied to the agricultural machinery which the workforce normally built. The legend below the cockpit reads, appropriately, Moscow!.



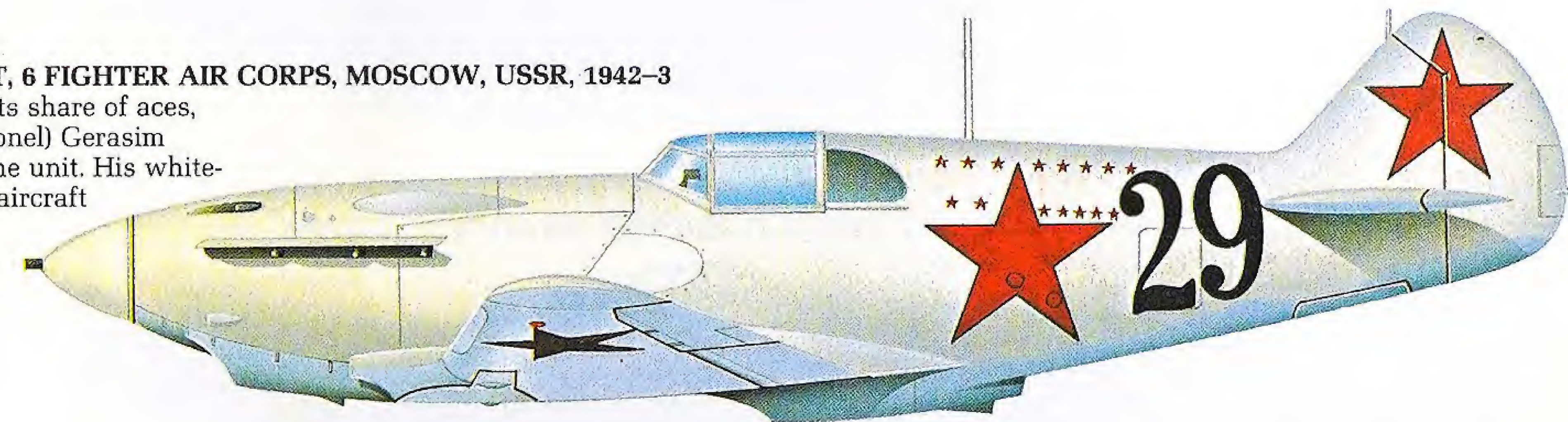
LaGG-3, V-VS (SOVIET AIR FORCE), ALA-SEDOKSA, FINLAND, SEPTEMBER 1942

Force-landed during the Continuation War in Finland, this was one of three captured machines impressed into service with 32 and 11 Sqns of the Finnish Air Force. They were coded LG-1 to -3 and received the standard yellow Eastern Front colors as well as the national swastika marking.



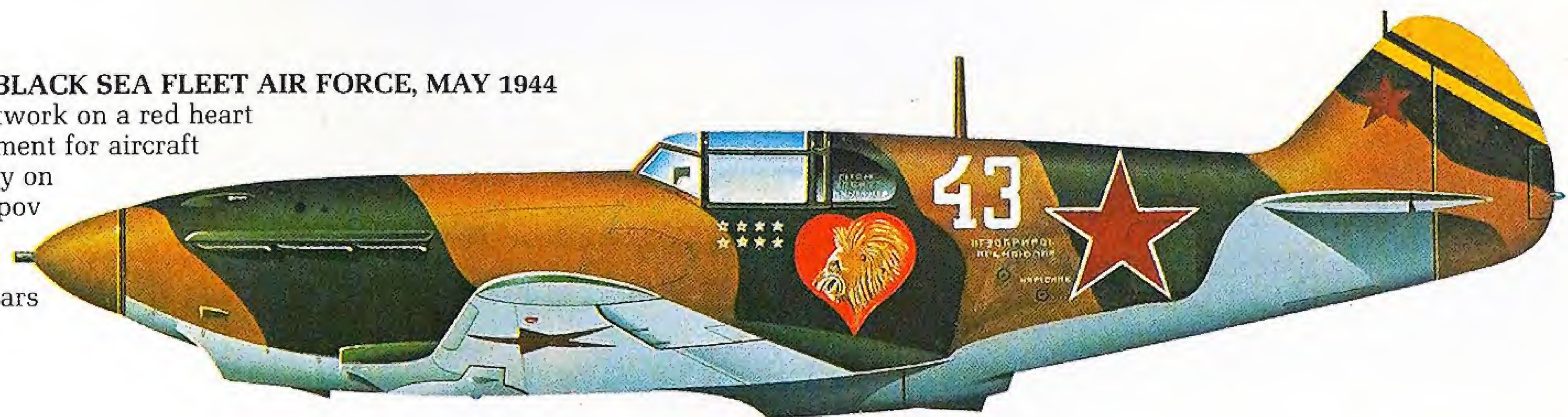
LaGG-3, 178th REGIMENT, 6 FIGHTER AIR CORPS, MOSCOW, USSR, 1942-3

The Soviet Air Force had its share of aces, such as Captain (later Colonel) Gerasim Grigoryev, deputy CO of the unit. His white-distempored winter-finish aircraft shows 15 victory stars on the rear fuselage.



LaGG-3, 9th REGIMENT, BLACK SEA FLEET AIR FORCE, MAY 1944

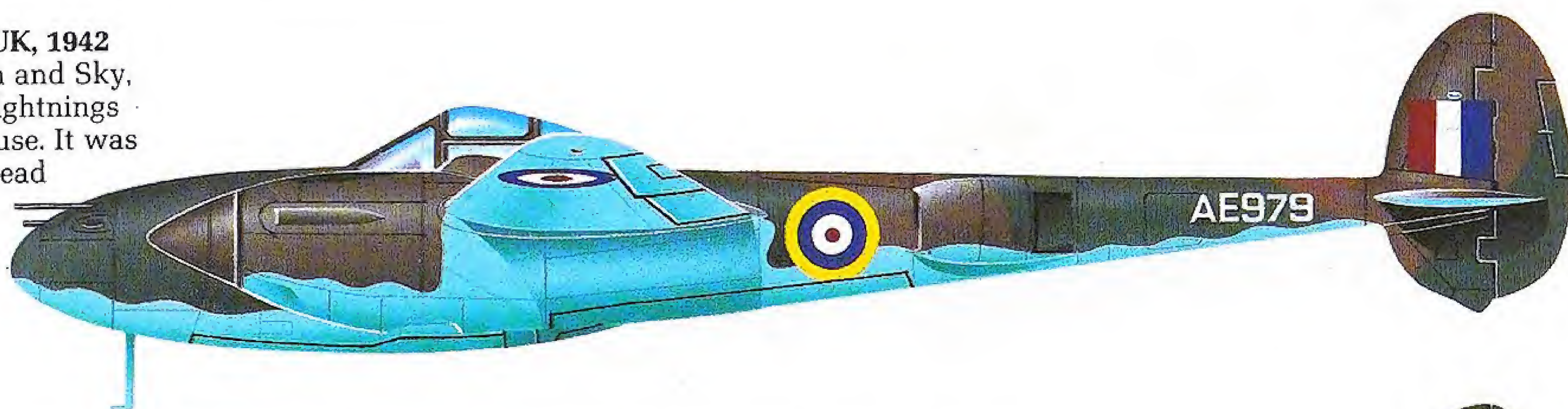
An intricate lion's head artwork on a red heart was an unusual embellishment for aircraft that were almost constantly on operations, but Yuri Shchipov or his groundcrew obviously found the time to apply it. Eight victory stars are under the cockpit sill.



LOCKHEED P-38 LIGHTNING

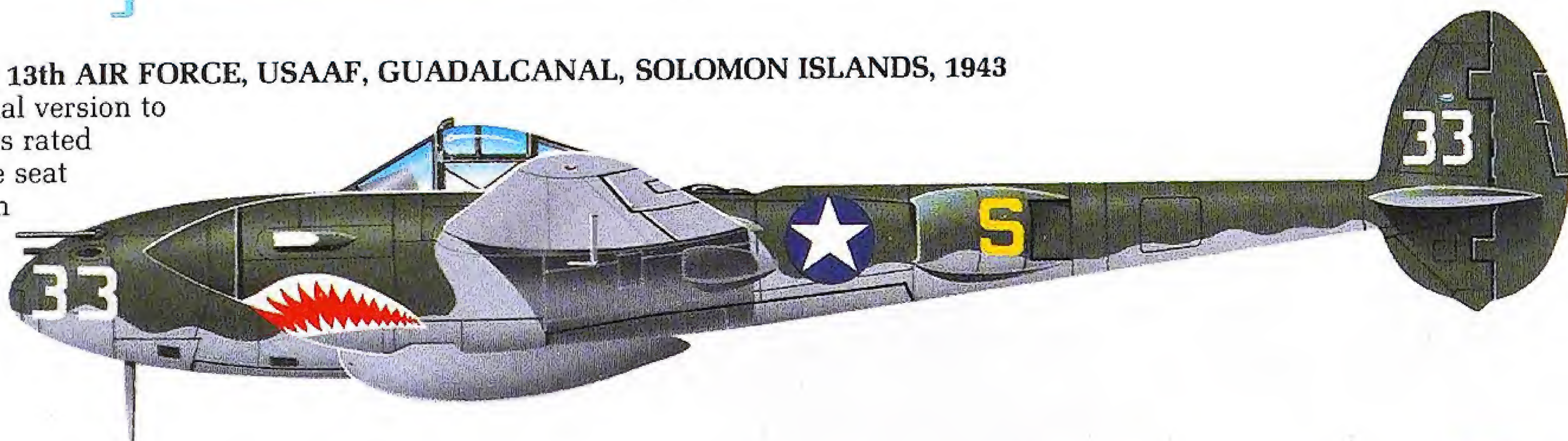
In the design of the Lightning, Lockheed combined a number of innovative ideas to meet a 1936 Air Corps requirement for a twin-engined interceptor. It had a twin-boom layout with a central nacelle for the pilot and a battery of guns, a tricycle undercarriage, and turbo-superchargers for the engines. First flight was in January 1939 and service debut was mid 1941. Early problems were eventually resolved and the aircraft went on to serve with distinction on every US war front. Total production reached 9923.

Mk 1, RAF BOSCOMBE DOWN, UK, 1942
Painted in Dark Green, Dark Earth and Sky, this was one of a small batch of Lightnings trialed by the RAF for prospective use. It was subsequently decided not to go ahead with the purchase of the type. Canceled RAF orders totaled 667 aircraft, those already built being transferred to the USAAF.



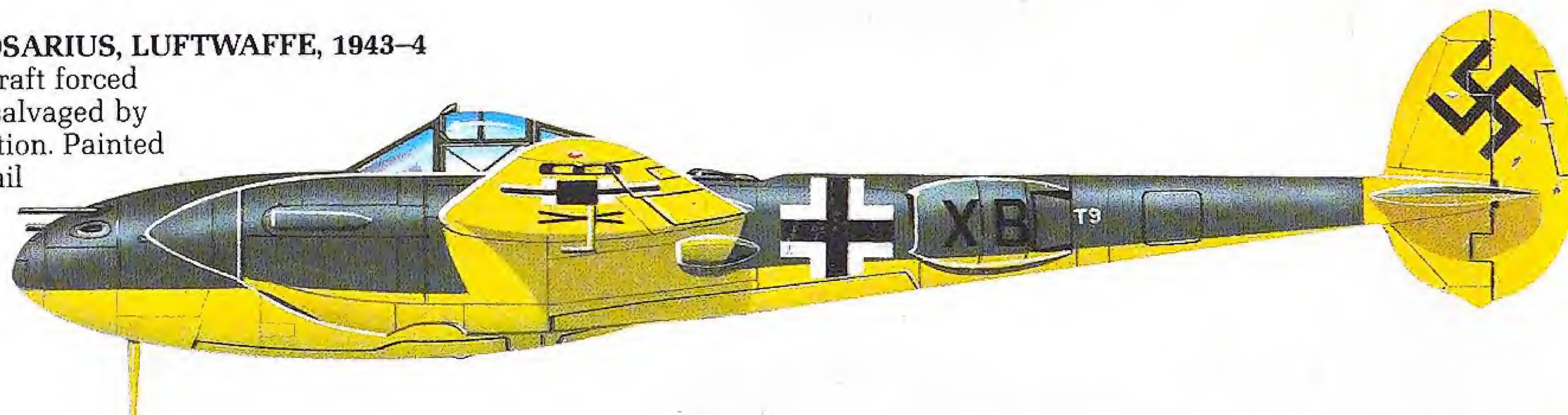
P-38F-5, 347th FIGHTER GROUP, 13th AIR FORCE, USAAF, GUADALCANAL, SOLOMON ISLANDS, 1943

The F was the first fully operational version to enter service and when flown at its rated altitude it could defeat most single seat fighters. Shark-mouth markings on this Olive Drab/Neutral Gray aircraft brighten up an otherwise standard color scheme for the period.



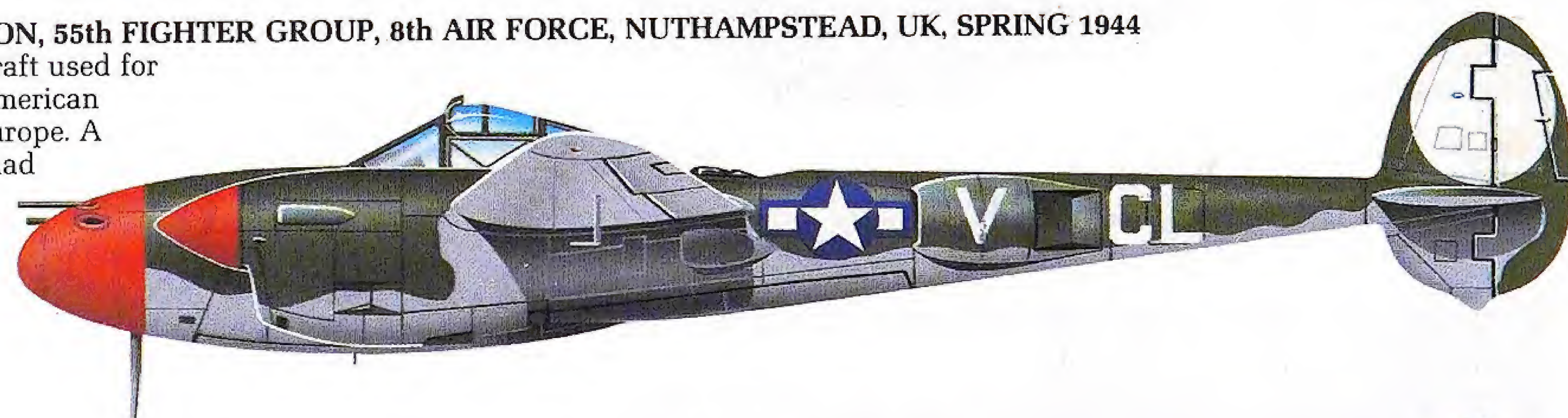
P-38E, SONDERKOMMANDO ROSARIUS, LUFTWAFFE, 1943-4

This is an early 8th Air Force aircraft forced down over occupied Europe and salvaged by the Luftwaffe for technical evaluation. Painted yellow underneath and over the tail unit (indicating a trials aircraft); it was given the code T9 + XB.



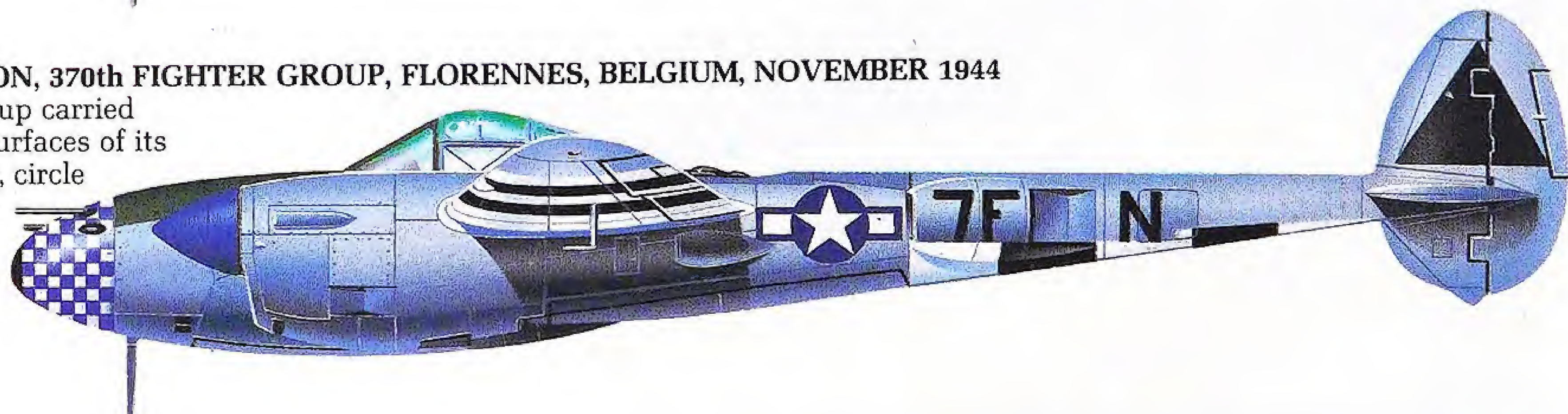
P-38J, 338th FIGHTER SQUADRON, 55th FIGHTER GROUP, 8th AIR FORCE, NUTHAMPSTEAD, UK, SPRING 1944

Standard ETO scheme on an aircraft used for fighter escort duties during the American daylight bomber offensive over Europe. A point of interest is that this unit had apparently ignored the USAAF order that yellow and white checkerboard markings were to be applied to spinners and engine cowlings from March 1944.



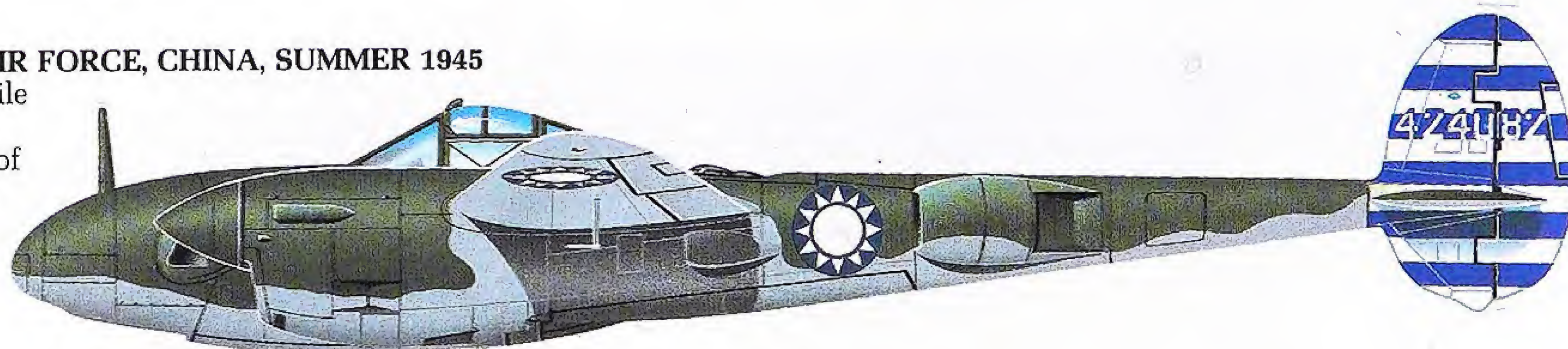
P-38J, 401st FIGHTER SQUADRON, 370th FIGHTER GROUP, FLORENNES, BELGIUM, NOVEMBER 1944

Part of the 9th Air Force, this group carried geometric symbols on the outer surfaces of its aircrafts' tails – triangle for 401st, circle for 402nd and square for 485th – with the aircraft letter painted on the inside surface (in this case "N"). The unit converted to P-51s in 1945.



F-5E, CHINESE NATIONALIST AIR FORCE, CHINA, SUMMER 1945

The Lightning's design was versatile enough for a number of different equipment "fits" to be added, one of which was a reconnaissance nose containing cameras. Serial 44-24082 was one of a batch supplied to Chiang Kai-shek's air force.

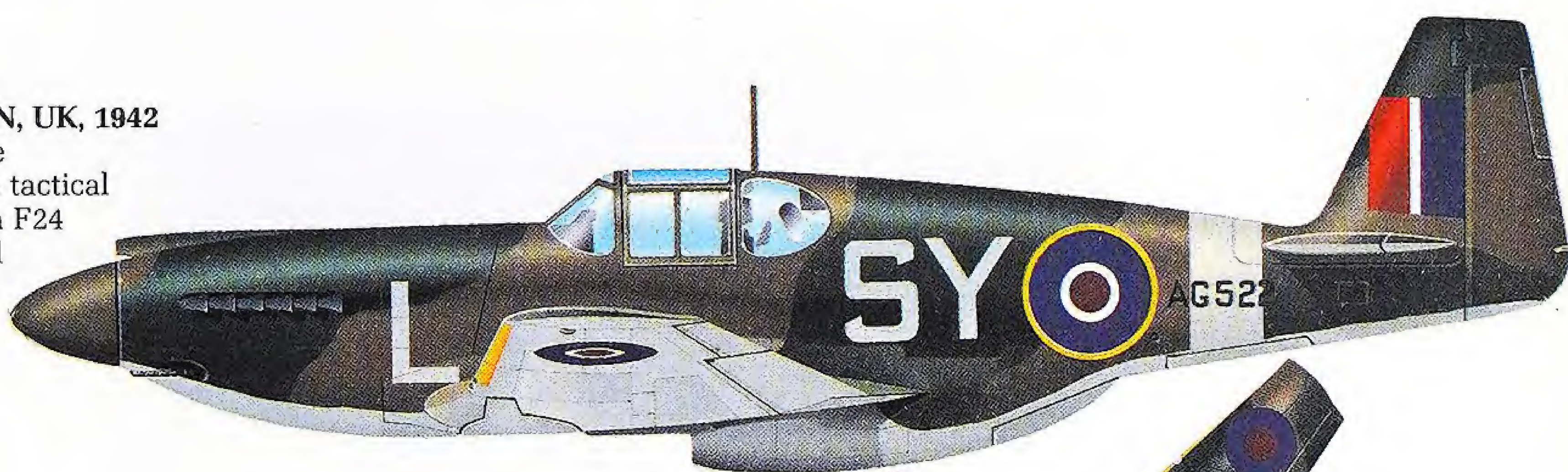


NORTH AMERICAN P-51

When North American Aviation offered to design a new fighter for Britain they could hardly have imagined just how successful the resulting aircraft would become. It took just 117 days to produce the first prototype and Mustang Is entered RAF service in April 1942 powered by the Allison engine. Some 800 of these early Mustangs were delivered before the famous Merlin engine was adopted and the aircraft at last found its true worth. Total production of all variants reached 15,586.

Mk I, 613 SQUADRON, RAF OUSTON, UK, 1942

Dark Green, Dark Earth and Sky were the colors used for aircraft engaged in tactical reconnaissance during this period. An F24 camera was fitted immediately behind the pilot.

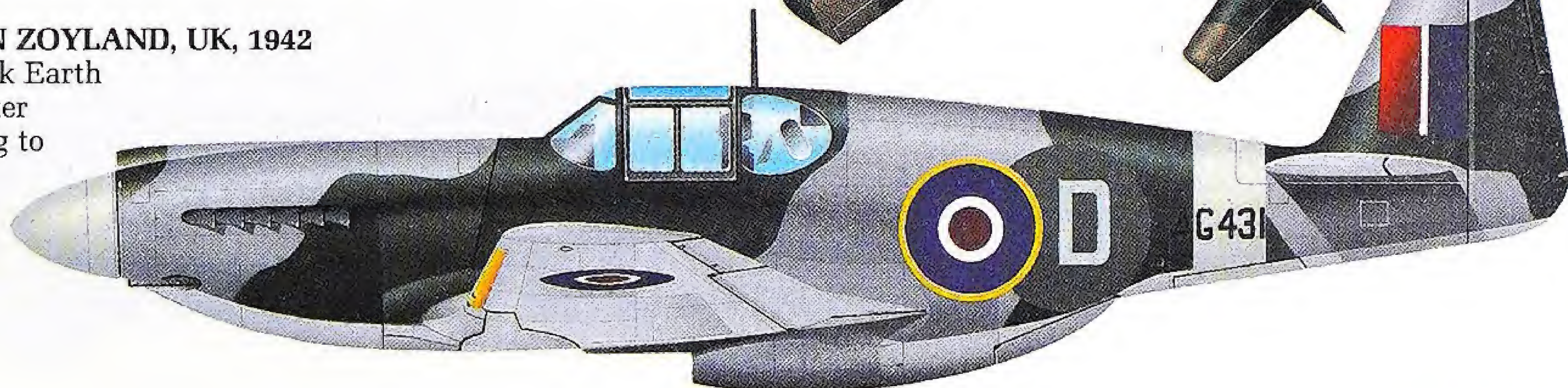


Plan-view camouflage scheme applied to the 613 Sqn aircraft. One of a number of schemes, it was known as Pattern C.



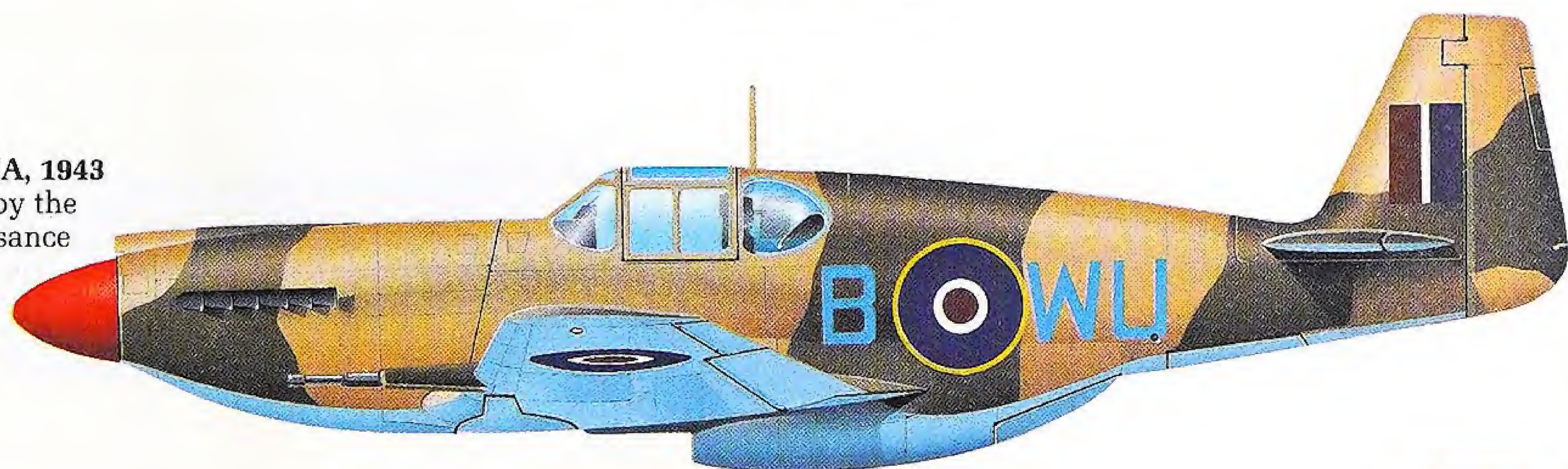
Mk I, 16 SQUADRON, RAF WESTON ZOYLAND, UK, 1942

Mixed Gray was applied over the Dark Earth from July 1942, reflecting the over-water offensive operations that were starting to increase dramatically. Sea Gray Medium then replaced the Sky undersides.



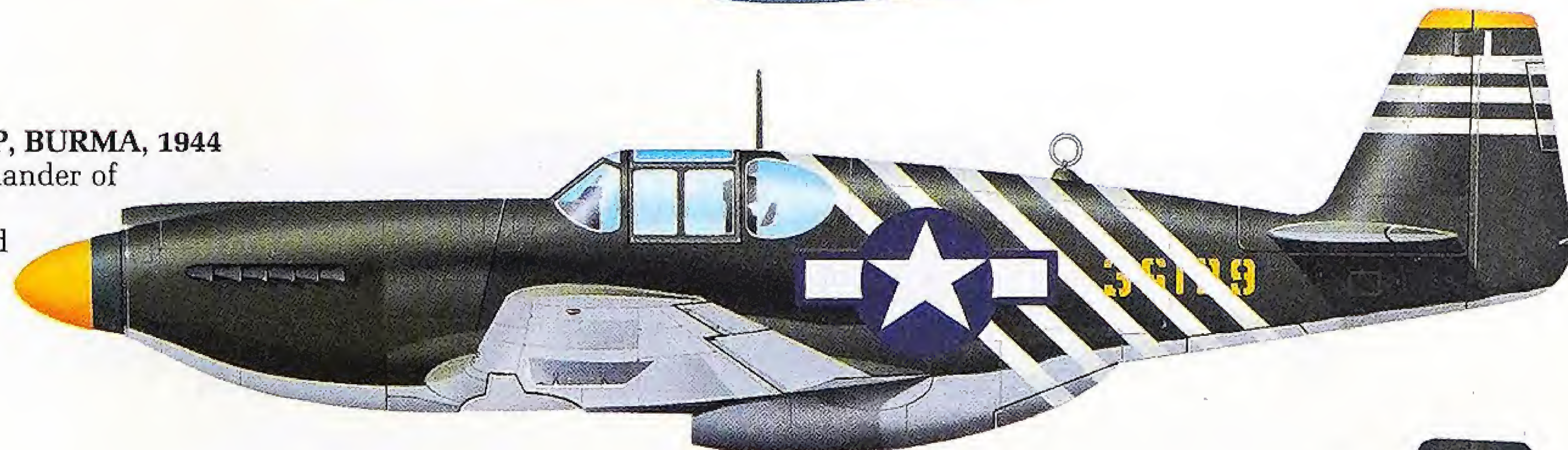
F-6A, 225 SQUADRON, RAF, TUNISIA, 1943

One of four USAAF aircraft borrowed by the Royal Air Force for tactical reconnaissance duties and given unit codes over the desert camouflage, but no serial number.



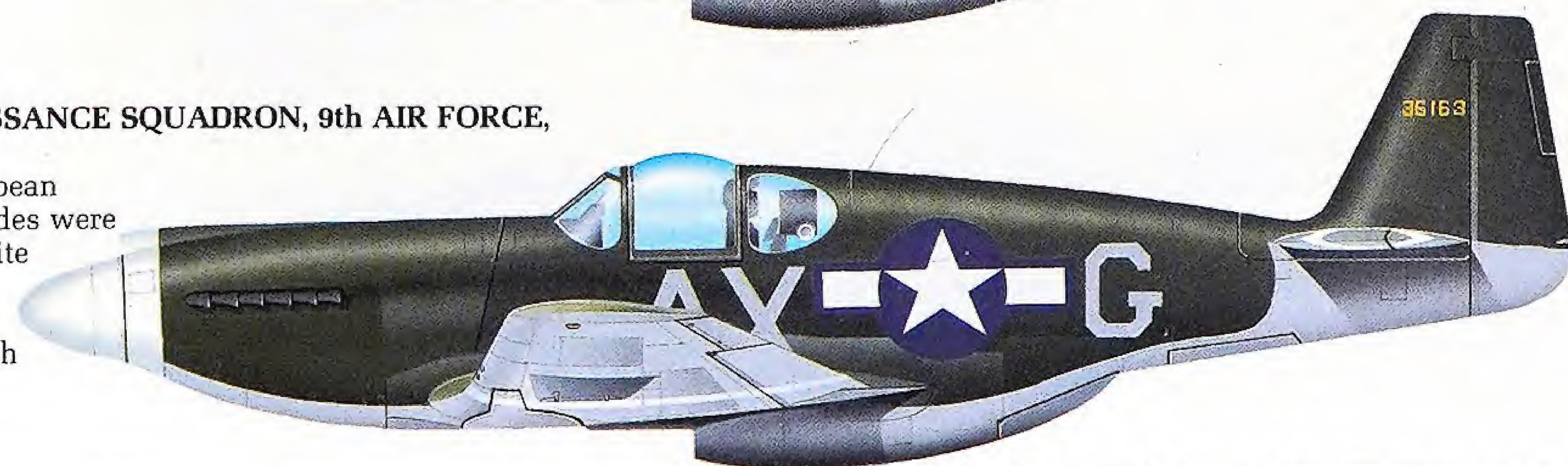
P-51A, 1st AIR COMMANDO GROUP, BURMA, 1944

Flown by Col Philip Cochrane, Commander of the 1st ACG, the aircraft carries the standard identification stripes applied to all ACG-flown machines. On the rear fuselage is a direction-finding loop antenna.



F-6B, 107th TACTICAL RECONNAISSANCE SQUADRON, 9th AIR FORCE, USAAF, UK, 1944

Late war markings in the ETO (European Theater of Operations). Light gray codes were painted over the Olive Drab, 12in white nose band and 15in wide wing and tailplane bands were applied for identification to reduce confusion with German Me109s.

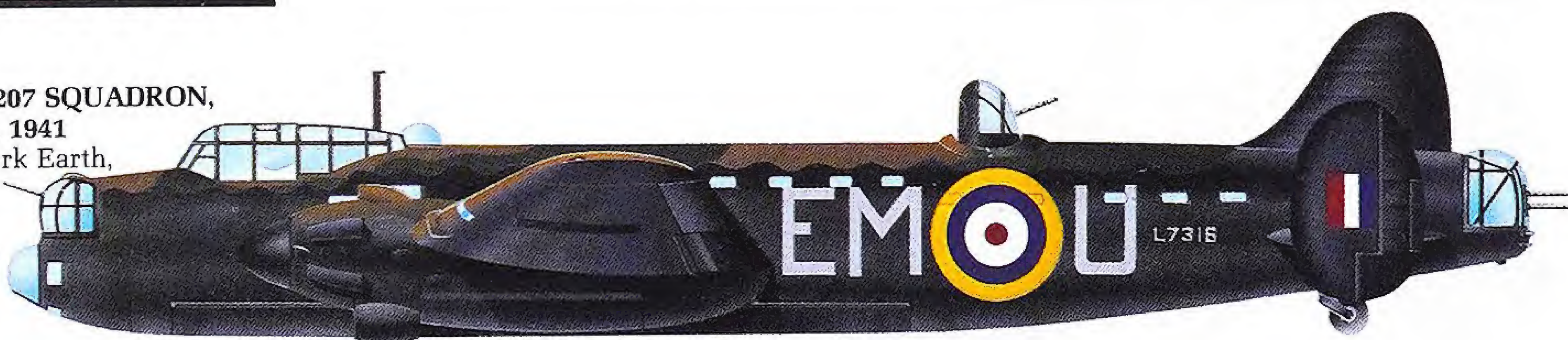


AVRO LANCASTER

Undoubtedly the most successful heavy bomber to serve with any of the combatants in World War II, the Lancaster was developed from the less than capable twin-engined Avro Manchester. Four Rolls-Royce Merlins (a few had Hercules radial engines) enabled the Lancaster to lift bomb loads of up to 22,000lb. The basic aircraft had a crew of seven and was armed with three gun turrets. Production totaled 7374.

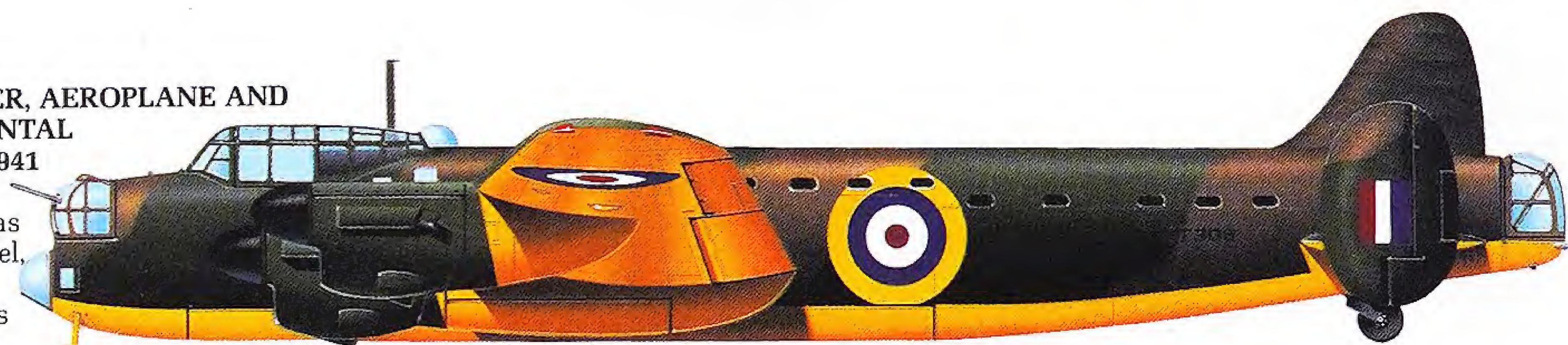
AVRO MANCHESTER I, 207 SQUADRON, RAF WADDINGTON, UK, 1941

Painted in Dark Green, Dark Earth, Black camouflage with gray codes and fuselage roundels 63in in diameter. The Manchester was deployed in late 1940 to 207 Sqn.



PROTOTYPE LANCASTER, AEROPLANE AND ARMAMENT EXPERIMENTAL ESTABLISHMENT, UK, 1941

This aircraft, which first flew on 9 January 1941, has a Type A1 fuselage roundel, a black serial and yellow undersurfaces denoting its non-operational function.



"PICCADILLY PRINCESS", B Mk I, 424 (TIGER) SQUADRON, ROYAL CANADIAN AIR FORCE, SKIPTON-ON-SWALE, UK, 1945

It has, rather unusually, light blue codes with the Type C1 roundel. Nose art was a particular feature of Canadian-operated aircraft.



B Mk III, 617 SQUADRON, RAF CONINGSBY, UK, 1943

This aircraft is specially modified for the attack of the Mohnen, Eder and Sorpe Dams. It has the standard Dark Red codes and serial (note G = Guard suffix). The mid-upper turret has been deleted and the bomb-bay cut away.



B Mk I, 149 (EAST INDIA) SQUADRON, RAF METHWOLD, UK, 1945

The yellow fin bars denote the G-H radar-equipped C Flight leader in 3 Group.



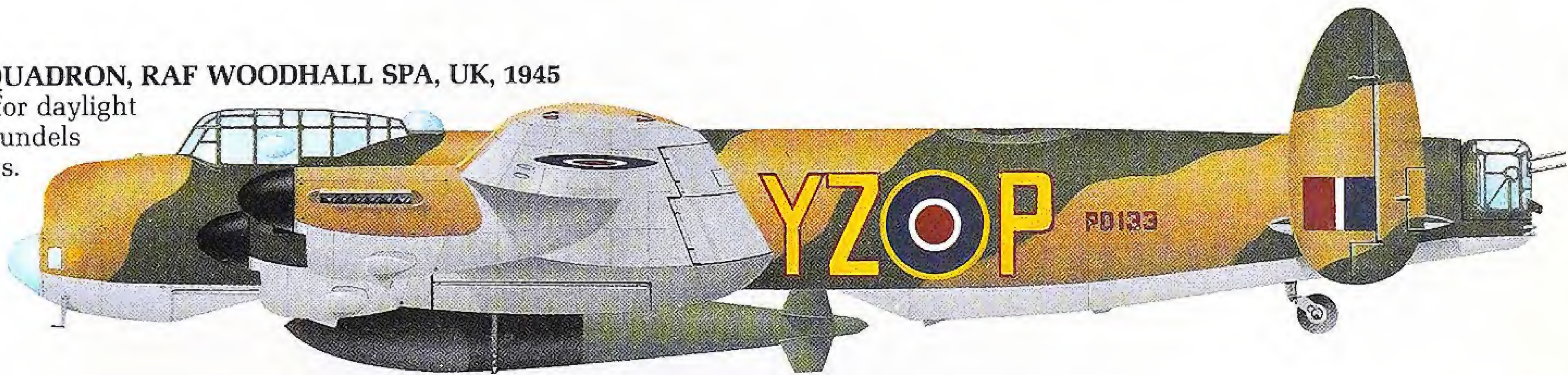
B Mk VI, 635 SQUADRON, RAF, DOWNHAM MARKET, UK, 1944

This late Lancaster version had increased performance for Pathfinder duties and carried radar jamming devices. Note the absence of nose and mid-upper turrets.



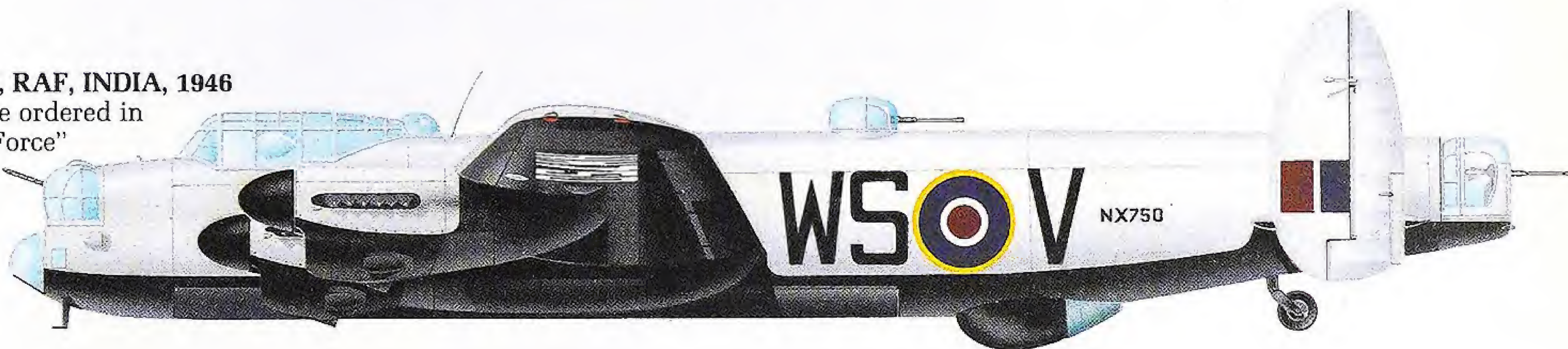
B Mk I (SPECIAL), 617 SQUADRON, RAF WOODHALL SPA, UK, 1945

Shown here camouflaged for daylight operations with Type C roundels above and below the wings. It is shown carrying a "Grand Slam" bomb.



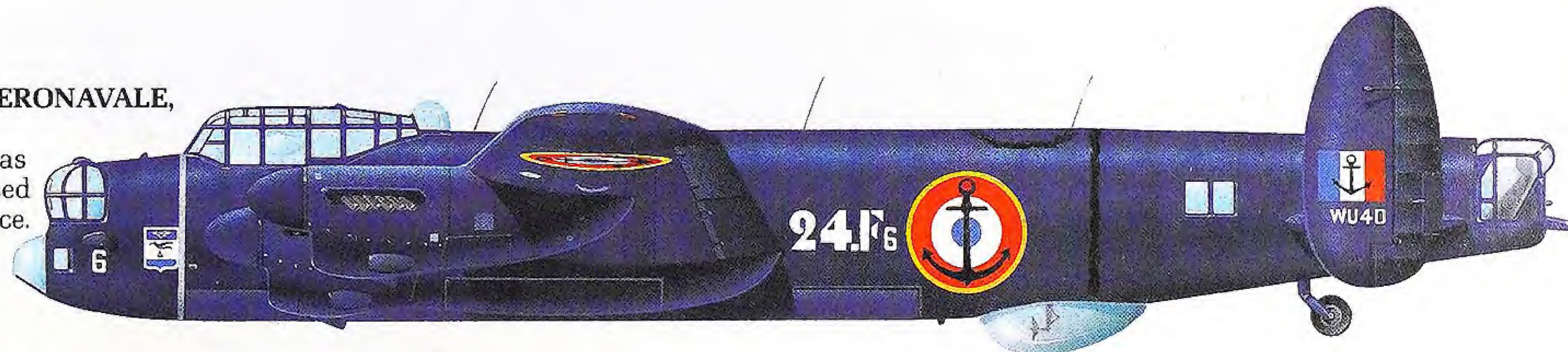
B Mk VIII, 9 SQUADRON, RAF, INDIA, 1946

White upper surfaces were ordered in February 1945 for "Tiger Force" aircraft destined for the war against Japan. The surrender took place before the aircraft began operations.



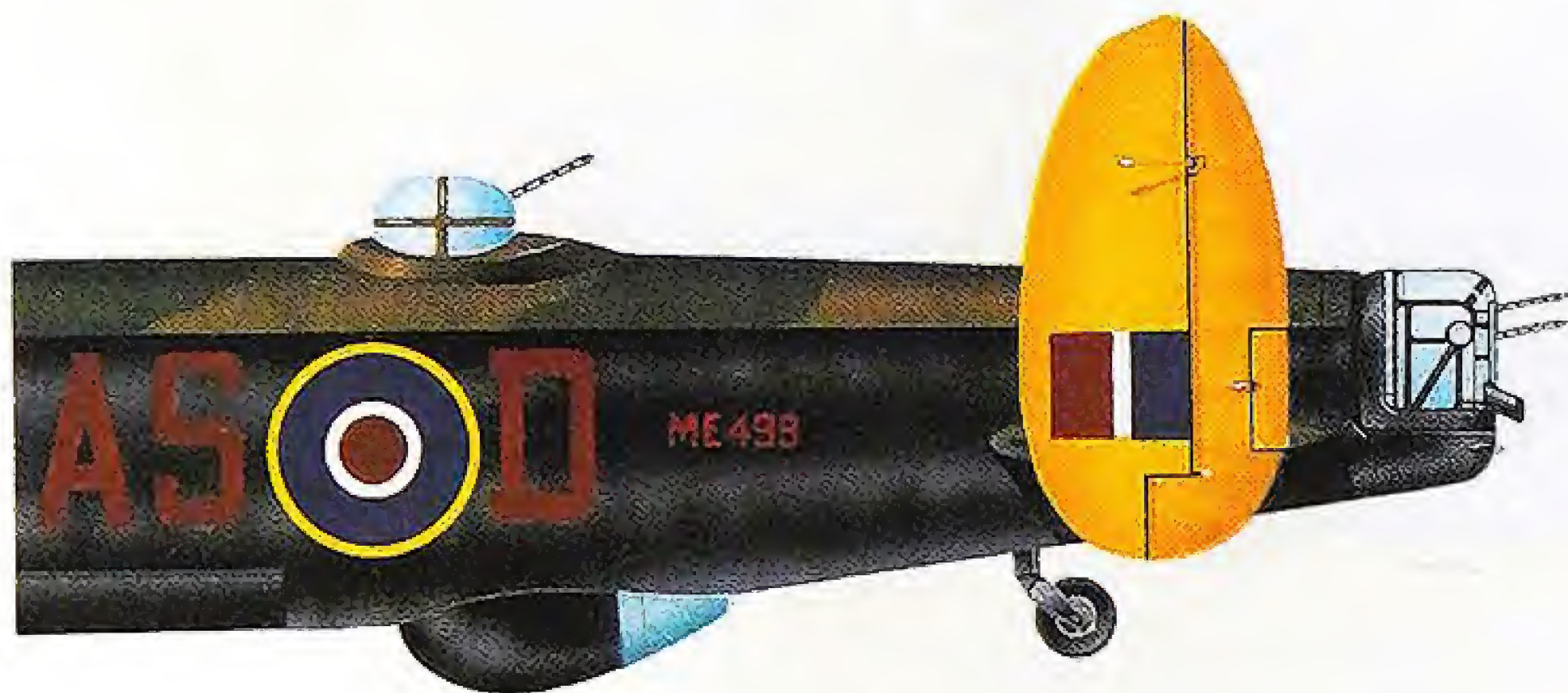
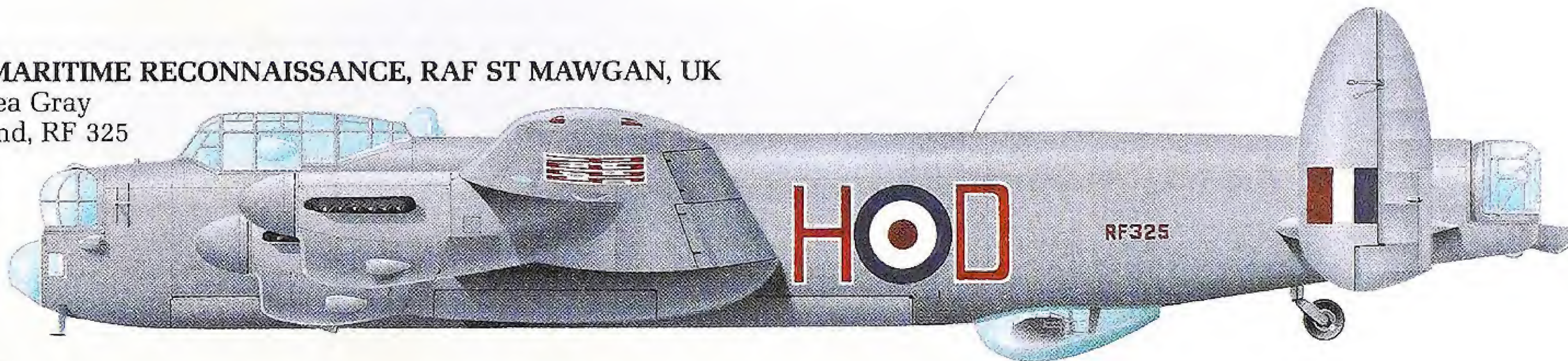
B Mk I, FLOTILLE 24F, AERONAVALE, FRANCE, 1953

Formerly PA432, WU40 was one of 54 delivered and used for maritime reconnaissance. The color was royal blue overall.



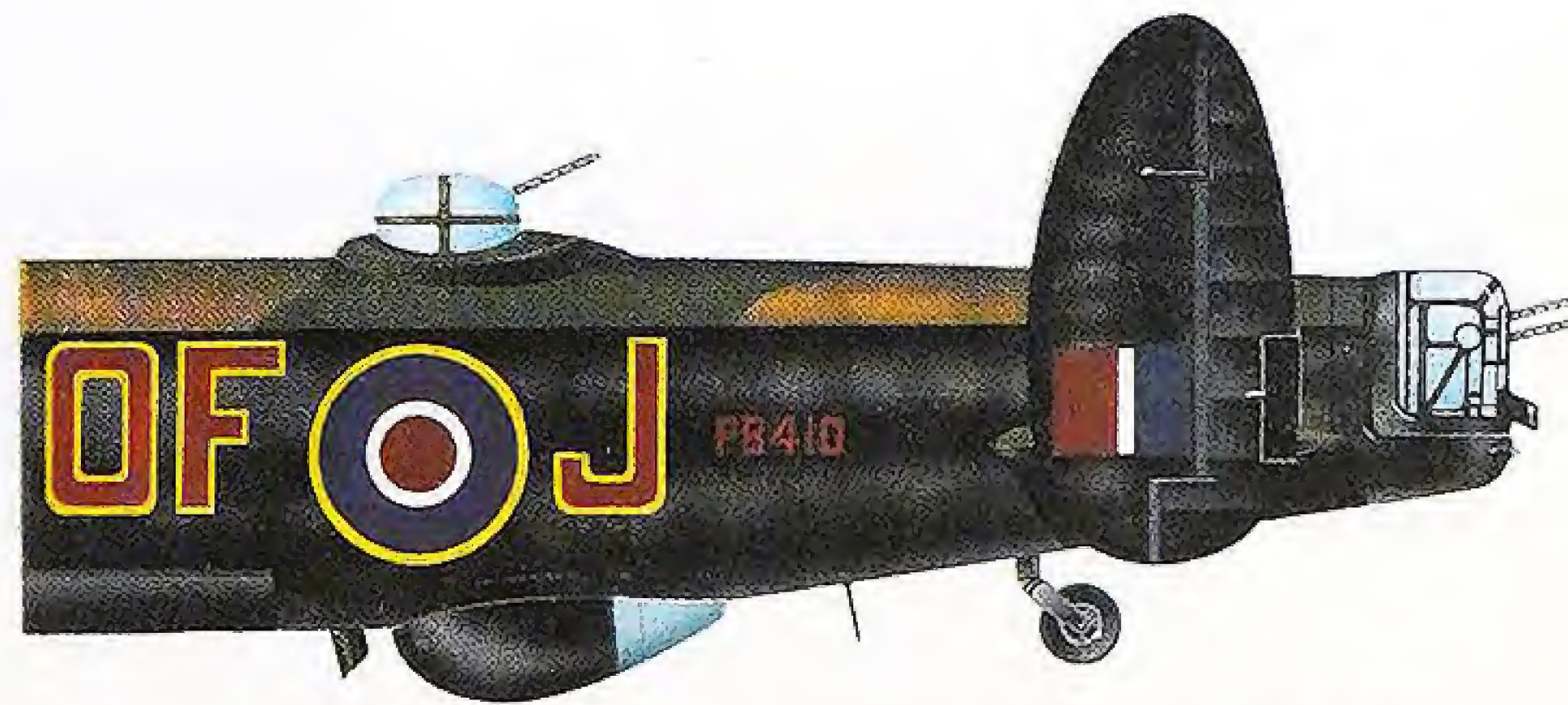
GR Mk III, SCHOOL OF MARITIME RECONNAISSANCE, RAF ST MAWGAN, UK

Finished in glossy Dark Sea Gray overall of Coastal Command, RF 325 was the last Lancaster in RAF service when retired in 1956.



Unusual formation-keeping markings experimented with by 166 Squadron when based at Kirmington 1944. The scheme was not as part of No 1 Group in widely adopted.

Note the Type B style upper wing roundel.



This shows a late war coding presentation used by a BIII of 166 Squadron. This location was by no means standard for codes.

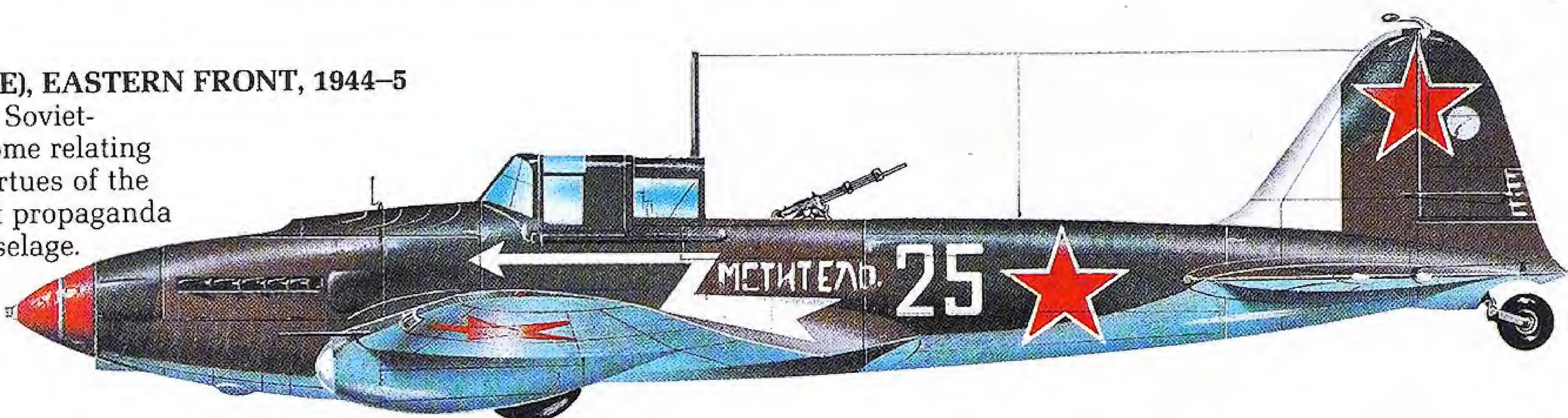


ILYUSHIN Il-2

Built in greater numbers than any other combat aircraft, the Soviet Il-2 was the outstanding all-purpose ground-attack aircraft of World War II. Armored in all the right places – mainly around the engine and cockpit – it was capable of surviving considerable damage, and was large enough to carry and deliver 1300lb of bombs and rockets. The early aircraft were single-seaters, a gunner's position being added on the Il-2m3. An improved model, the Il-10, appeared in 1944, and production of both types is believed to have reached some 40,000.

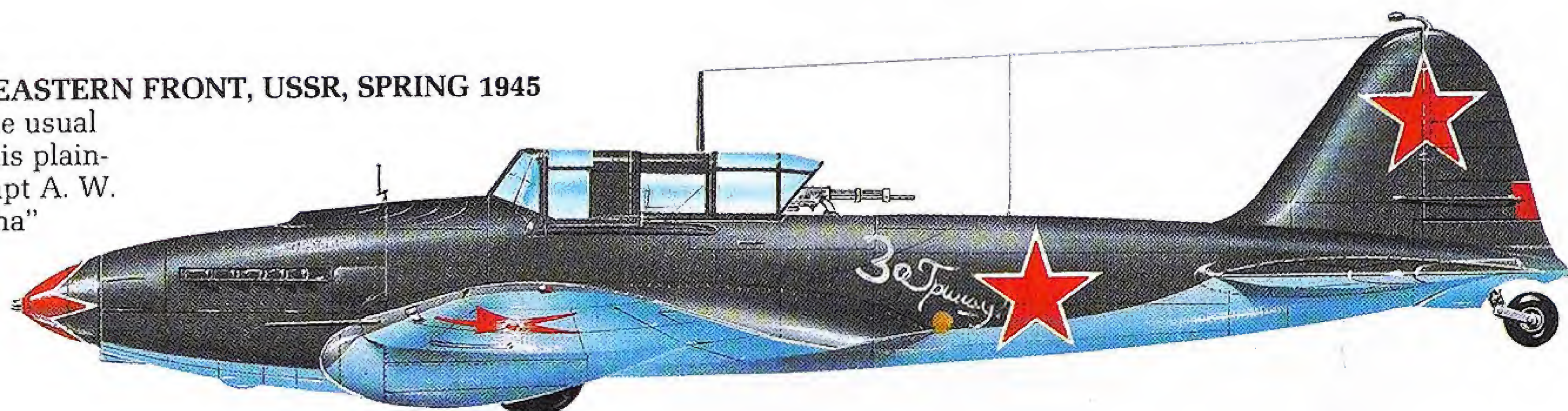
Il-2m3, V-VS (SOVIET AIR FORCE), EASTERN FRONT, 1944–5

Inscriptions were often applied to Soviet-operated aircraft during WWII, some relating to individuals, some hailing the virtues of the Motherland, while many were just propaganda slogans crudely painted on the fuselage. This is "The Avenger." The white fin and rudder markings denote the unit, which is unknown.



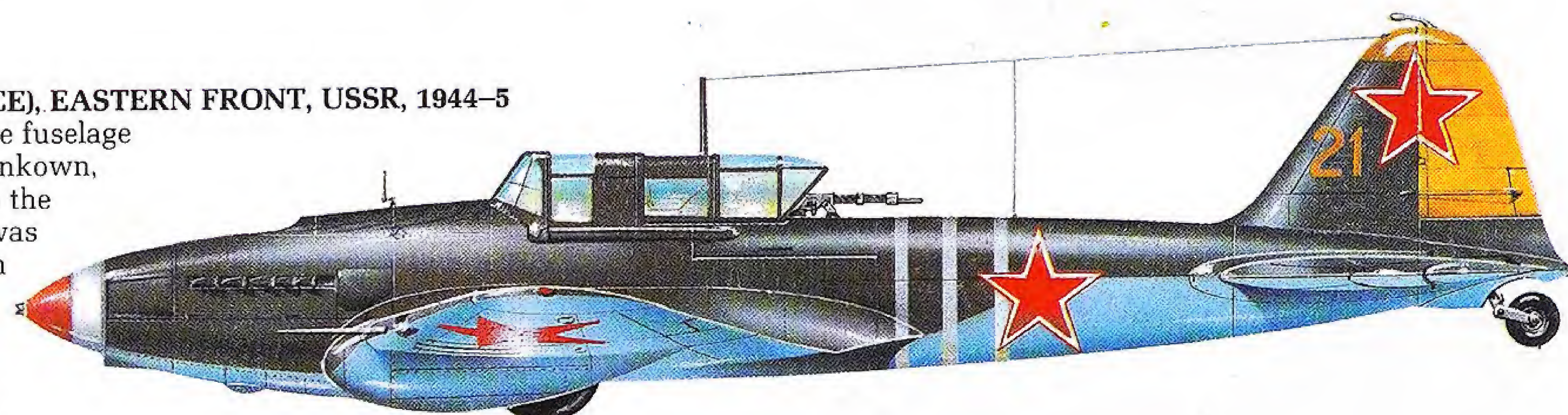
Il-2m3, 828 SHTURMOVI, V-VS, EASTERN FRONT, USSR, SPRING 1945

Dark green and light blue were the usual factory-applied colors for Il-2s. This plain-looking machine was flown by Capt A. W. Timoshenki, with the name "Grisha" (Gregory) by the fuselage star. Wrapped around the spinner is a painted star marking.



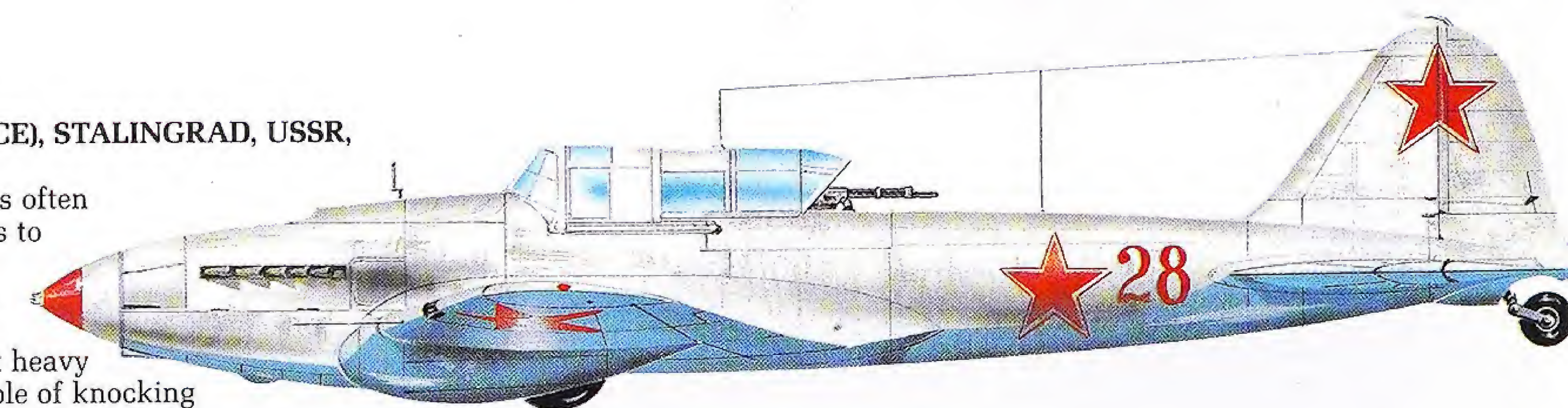
Il-2m3, V-VS (SOVIET AIR FORCE), EASTERN FRONT, USSR, 1944–5

The significance of the three white fuselage bands and the yellow rudder is unknown, although they probably related to the Regiment to which the machine was attached. Such was the protection afforded by the armored "bath" surrounding the engine and cockpit that even 20mm cannon shells often failed to penetrate it.



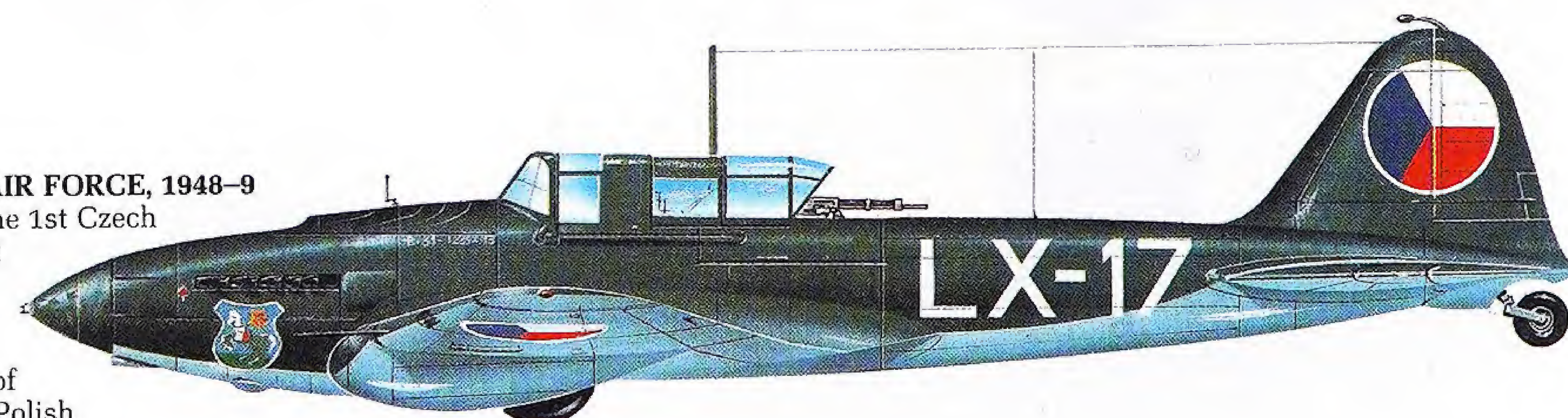
Il-2m3, V-VS (SOVIET AIR FORCE), STALINGRAD, USSR, FEBRUARY 1943

A temporary white distemper was often applied during the winter months to aircraft of both sides. Rear defensive armament comprised a single 12.7mm MG, while in the wings of later production aircraft heavy 37mm cannons were fitted, capable of knocking out even the heavily armored Tiger tanks of the German Panzer units.



Il-2B (B-31), CZECHOSLOVAK AIR FORCE, 1948–9

Having operated the type with the 1st Czech Mixed Air Division's 3rd Assault Regiment in 1944–5, the Czech AF retained the Il-2 as one of its post-war front-line combat aircraft. On the nose is the coat of arms of Ostrava, a city near the Polish frontier.

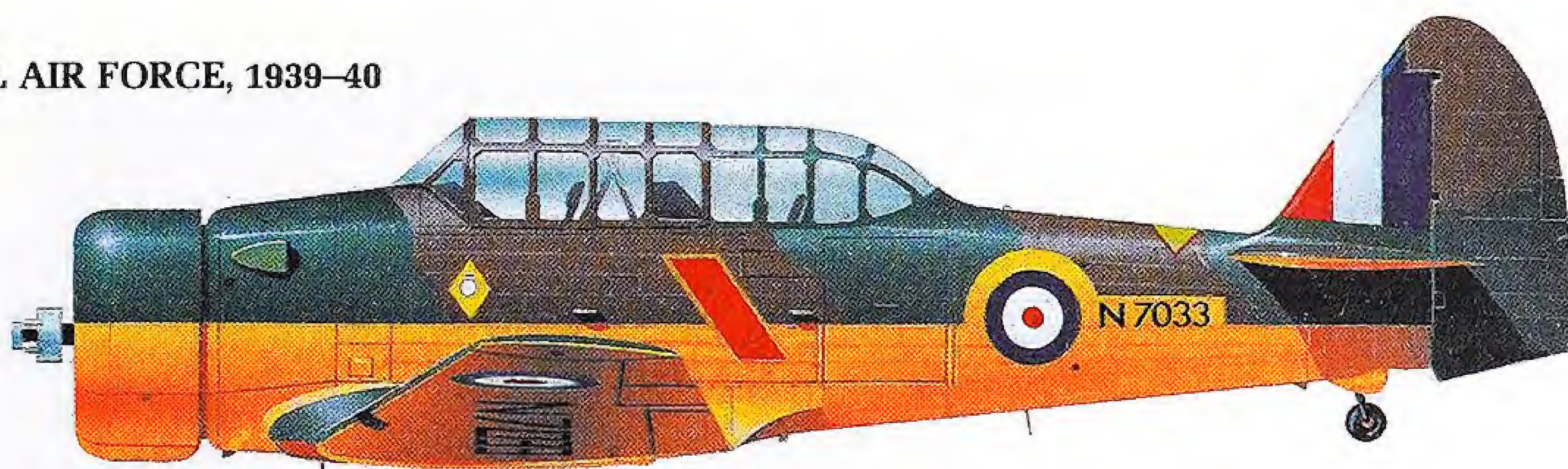


NORTH AMERICAN HARVARD

Derived from the original fixed undercarriage NA-16 of 1935, the Harvard was by far the most important Allied training aircraft in World War II. In American service it was known under a variety of designations including BC-1, AT-6 and T-6 Texan, while in British and Commonwealth use it was known as Harvard. Between 1935 and 1954, more than 20,000 were built, license-production being undertaken in Canada, Australia, Japan and Sweden.

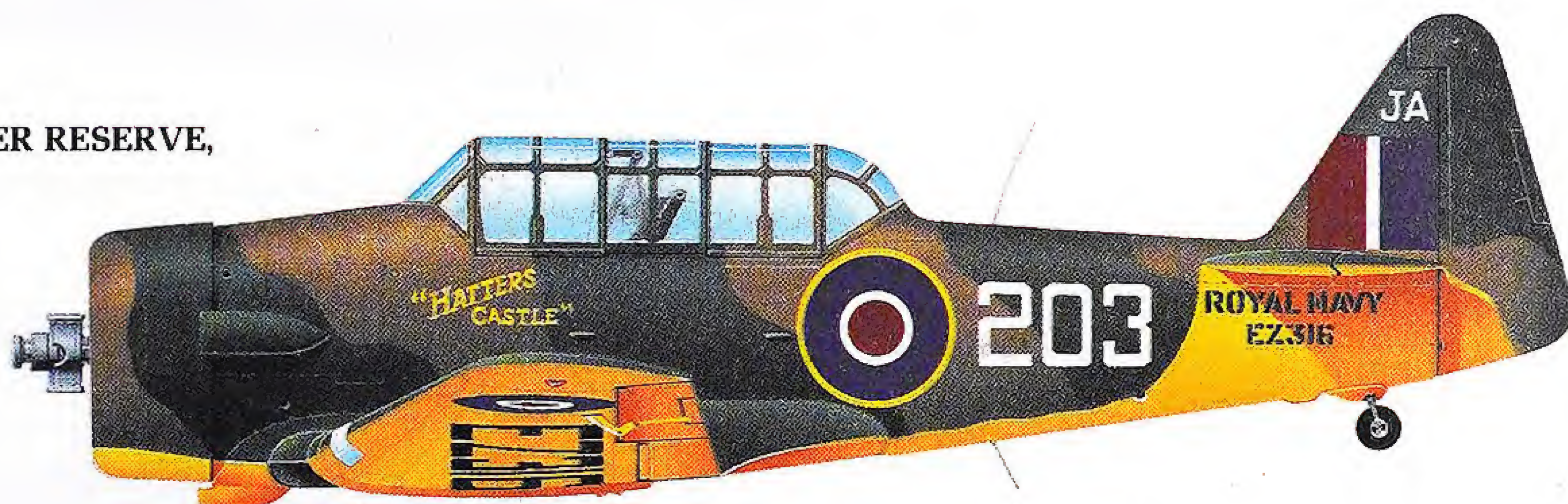
Mk I, No 2 FLYING TRAINING SCHOOL, ROYAL AIR FORCE, 1939-40

The standard trainer scheme used from 1938 through the opening stages of World War II. Markings include the 2 FTS badge below the cockpit and the gas patch applied over the rear fuselage (designed to change color should the aircraft fly through a gas cloud).



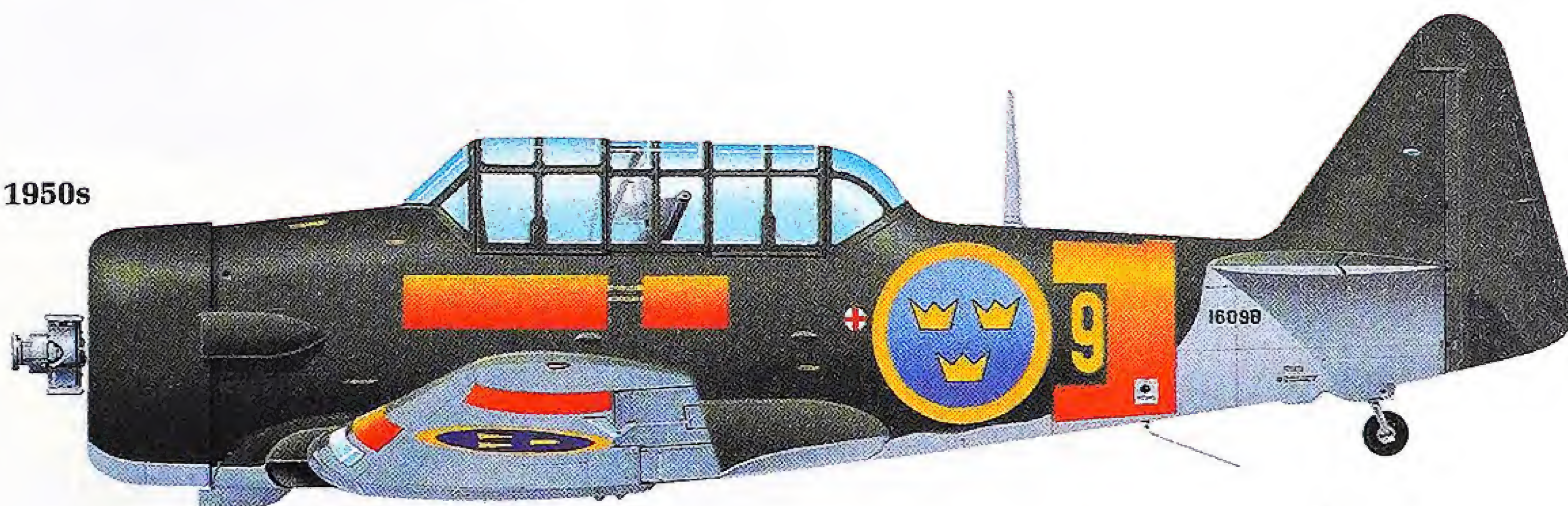
Mk IIA, 1832 SQN, ROYAL NAVAL VOLUNTEER RESERVE, RNAS STRETTON, LATE 1940s

Wartime trainer markings are retained on this RN-operated Harvard which was in service during the post-war period. JA on the fin was the station code.



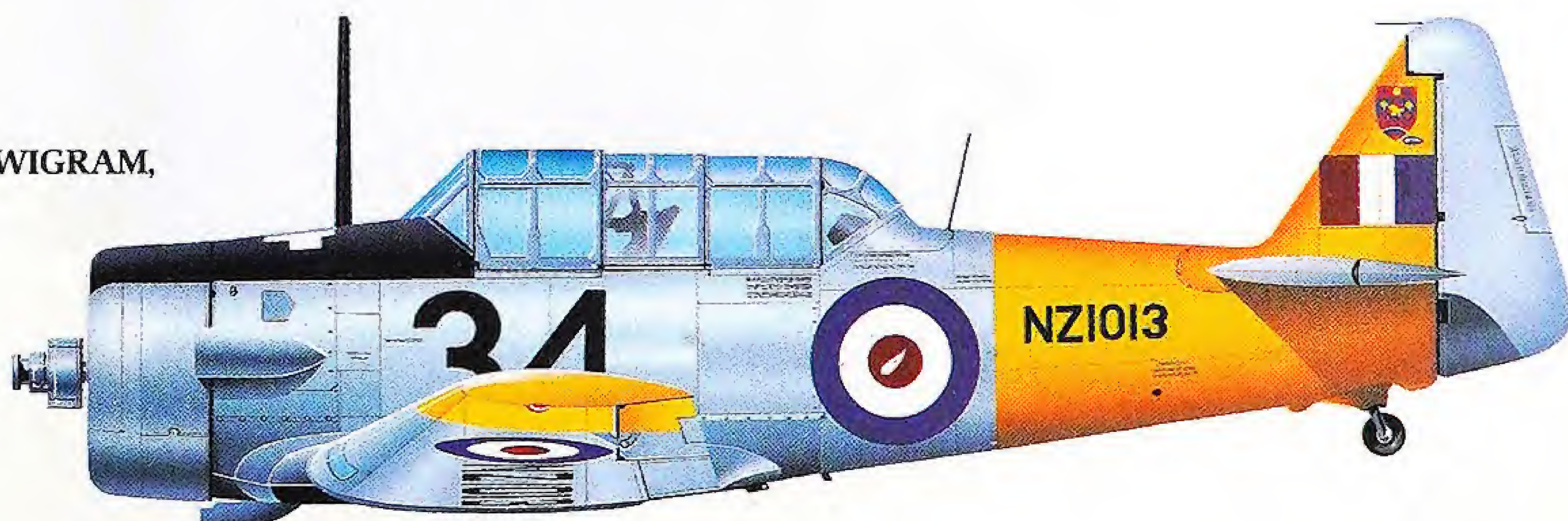
AT-6A, ROYAL SWEDISH AIR FORCE, EARLY 1950s

Sweden bought a number of surplus ex-USAAF Texans after WWII, giving them the designation Sk 14A. These remained in service until the early 1970s. Dayglo patches ensured a higher degree of visibility for training use.



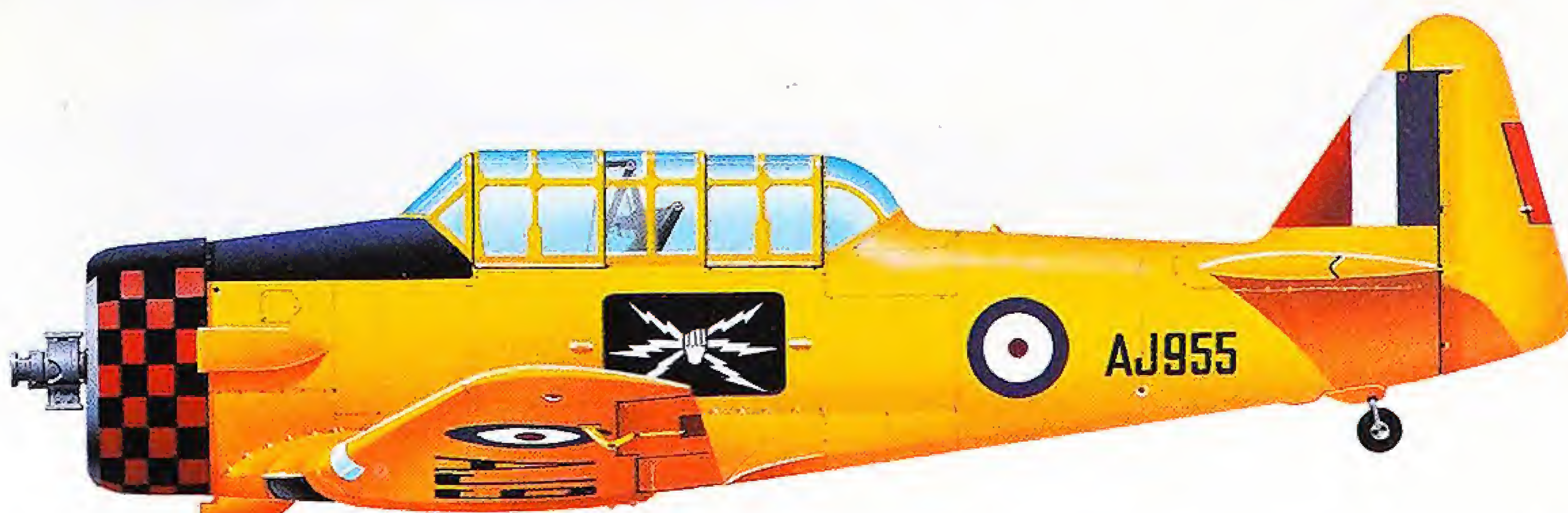
Mk IIA, ROYAL NEW ZEALAND AIR FORCE, WIGRAM, NEW ZEALAND, MID 1960s

After 36 years, the Harvard was finally retired from RNZAF service on 24 June 1977. It not only operated in the flying training role, but also as a Forward Air Control aircraft.



Mk II, No. 2 WIRELESS SCHOOL, ROYAL CANADIAN AIR FORCE, 1942

The serial number indicates that this aircraft was originally destined for the RAF, but was diverted to Canada for training use.

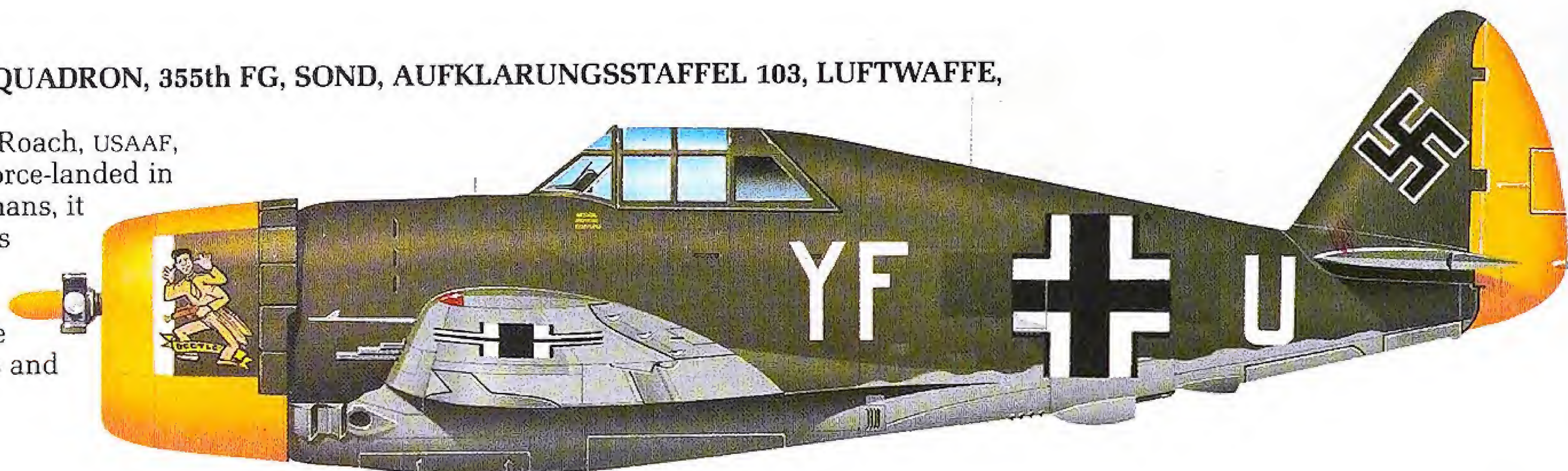


REPUBLIC P-47

When the first P-47s arrived in England, pilots transitioning from the streamlined Spitfire could hardly believe that such a large aircraft as the "Jug" could protect itself, let alone fight! They were soon proved wrong and this massive fighter established itself as a fine example of American engineering design. From first flight in May 1941 through to final delivery in September 1945, a total of 15,660 Thunderbolts were built and the type lingered on into the 1960s with some Latin American air arms.

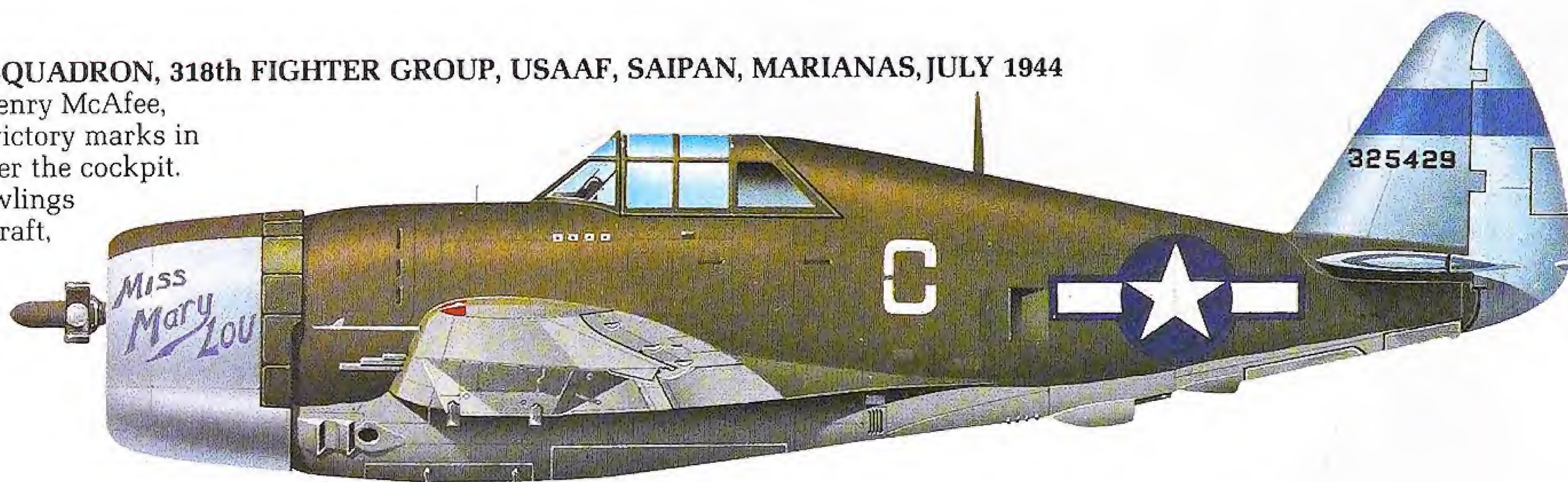
P-47D, EX-358th FIGHTER SQUADRON, 355th FG, SOND, AUFKLARUNGSSTAFFEL 103, LUFTWAFFE, ORLY, FRANCE, 1944

Flown by Second Lt William Roach, USAAF, "Beetle" ran out of fuel and force-landed in France. Salvaged by the Germans, it was given Luftwaffe markings although the 8th AF code (YF) and nose art were retained. It is believed to have been used to work out tactics and also to monitor US bomber formations.



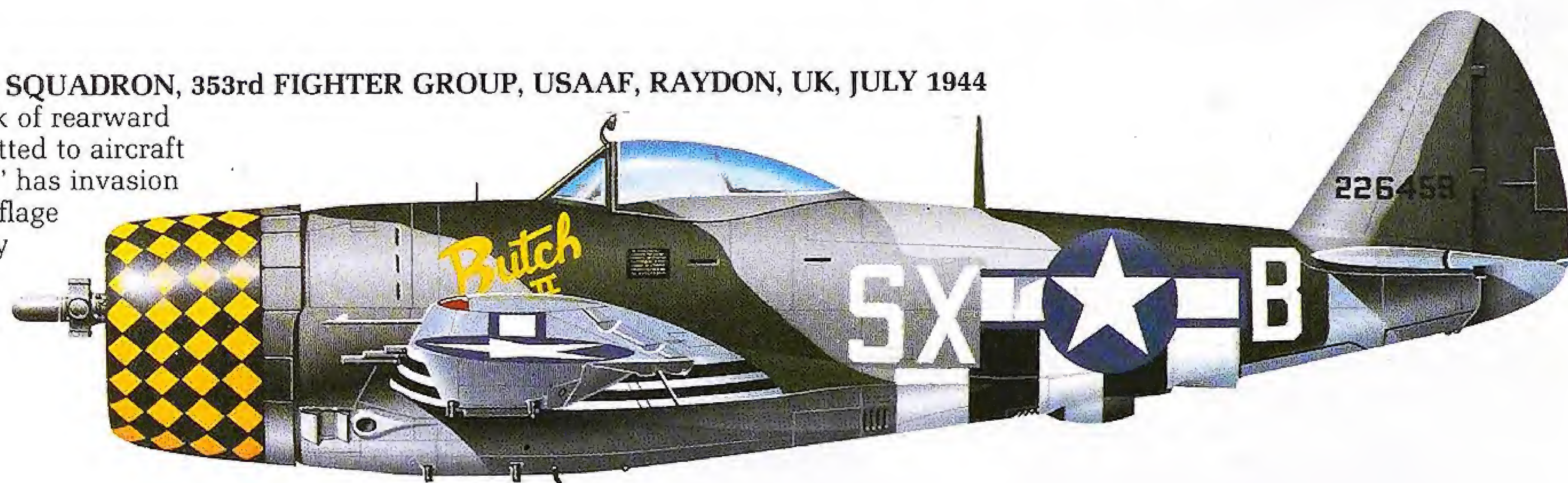
P-47D-20-RA, 19th FIGHTER SQUADRON, 318th FIGHTER GROUP, USAAF, SAIPAN, MARIANAS, JULY 1944

The personal aircraft of Maj Henry McAfee, "Miss Mary Lou" carries four victory marks in the form of Japanese flags under the cockpit. The unit had natural metal cowlings and tails to distinguish its aircraft, the white letter C being the identity letter of this particular machine.



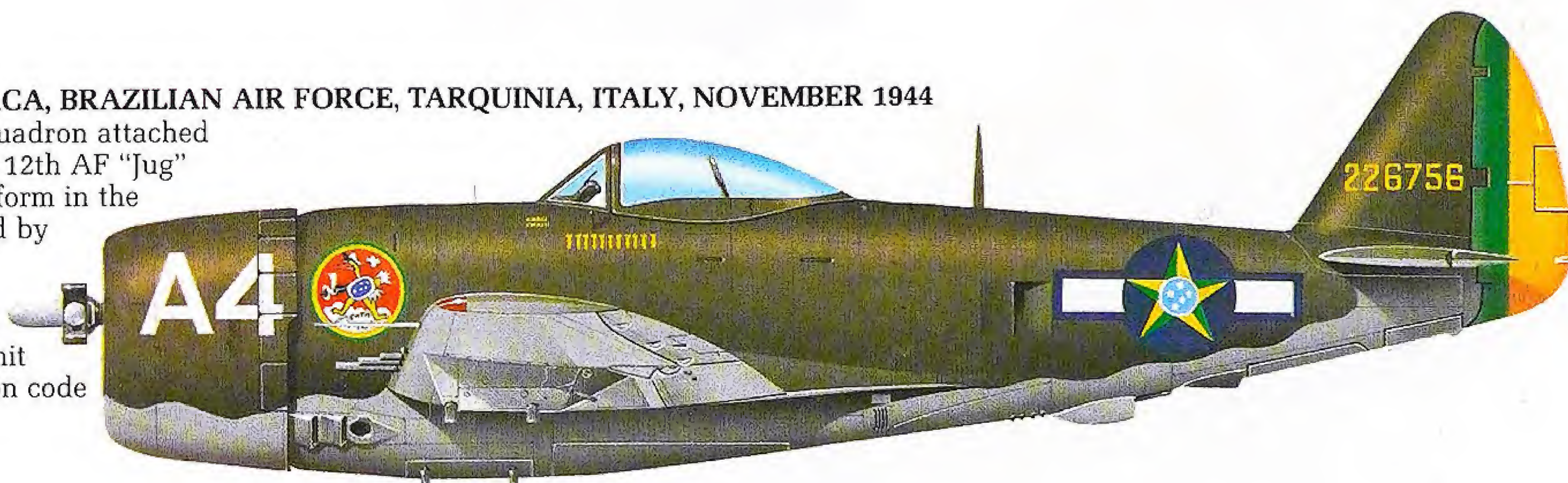
P-47D-25-RE, 352nd FIGHTER SQUADRON, 353rd FIGHTER GROUP, USAAF, RAYDON, UK, JULY 1944

To answer complaints of a lack of rearward vision, a bubble canopy was fitted to aircraft from the D-25 series. "Butch II" has invasion bands and a disruptive camouflage of Dark Green and Ocean Gray with natural metal undersides. Serial number was 42-26459.



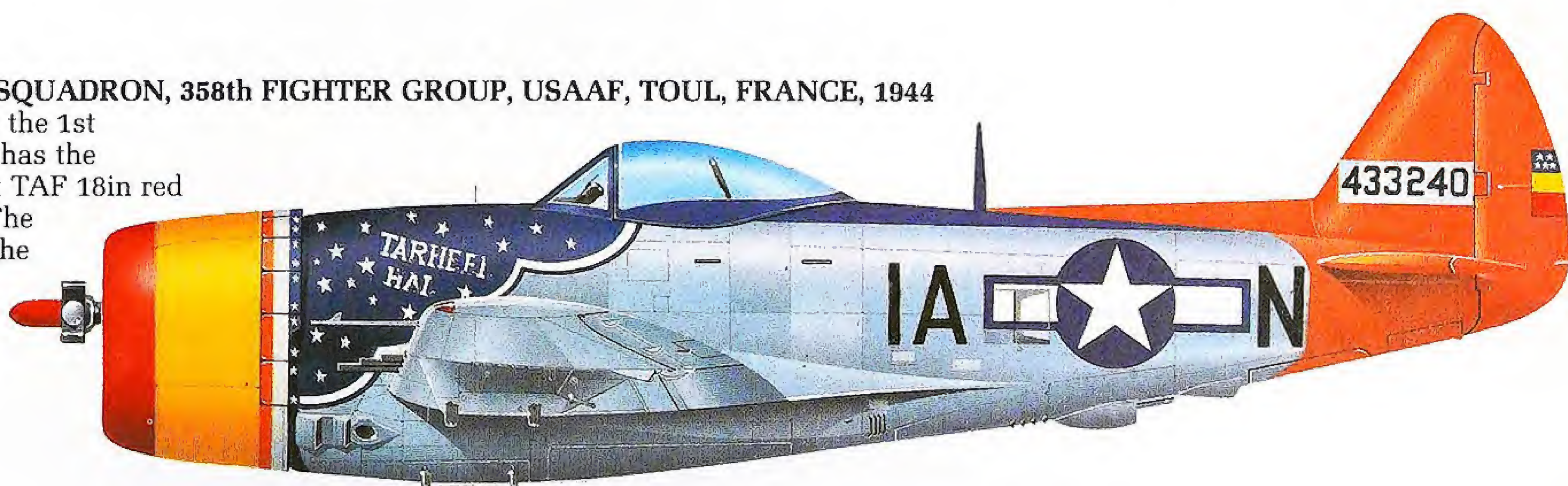
P-47D-25-RE, 1 GRUPO DE CACA, BRAZILIAN AIR FORCE, TARQUINIA, ITALY, NOVEMBER 1944

This unit formed the fourth squadron attached to the 350th FG, the last of the 12th AF "Jug" (short for Juggernaut) units to form in the Mediterranean theater. Manned by Brazilians, it used Olive Drab/Neutral Gray-finished aircraft with the national star marking applied over the US version, unit badge and 30in high recognition code on the engine cowlings.



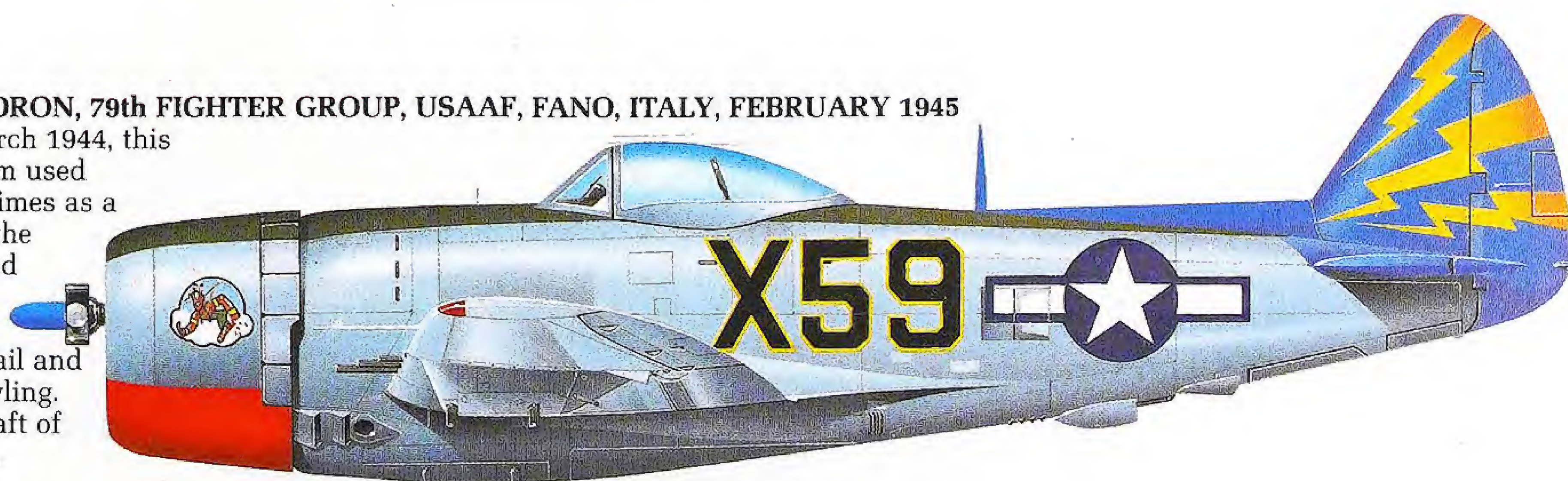
P-47D-30-RA, 366th FIGHTER SQUADRON, 358th FIGHTER GROUP, USAAF, TOUL, FRANCE, 1944

Shown following its transfer to the 1st Tactical Air Force, this aircraft has the letter/number code (1A), the 1st TAF 18in red cowl and the orange tail unit. The dorsal fin fillet (introduced on the D-40 version and retrofitted) reduced a tail flutter problem associated with the loss of the original "razorback" fuselage.



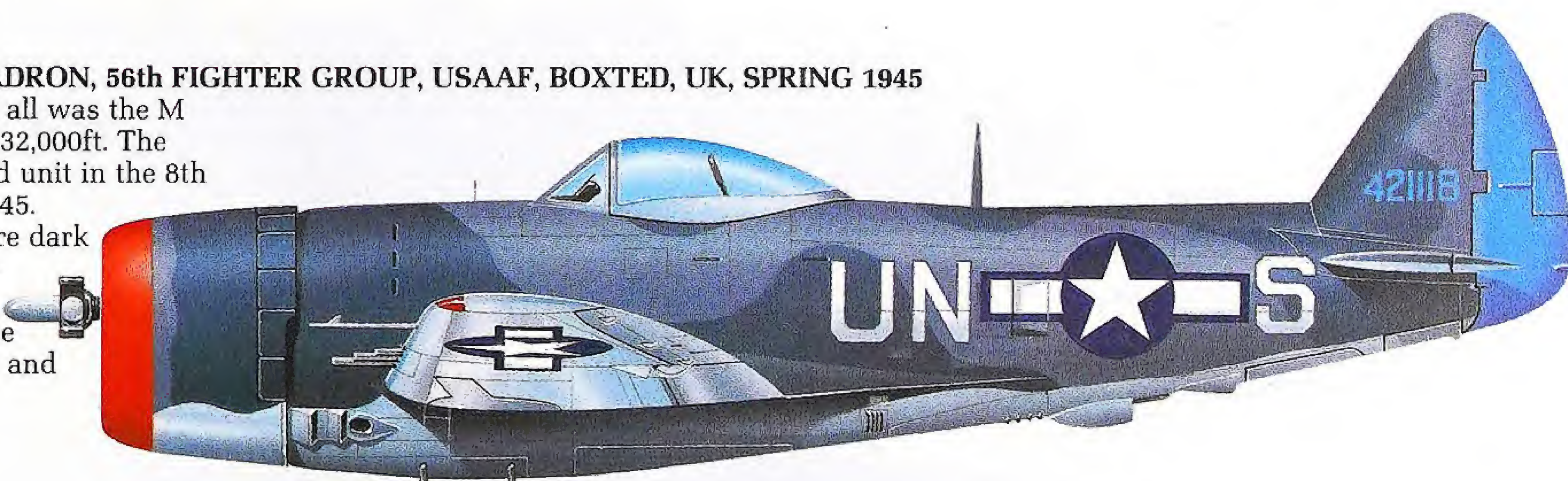
P-47D, 86th FIGHTER SQUADRON, 79th FIGHTER GROUP, USAAF, FANO, ITALY, FEBRUARY 1945

Receiving its first P-47s in March 1944, this unit adopted the coding system used previously on its P-40s. Sometimes as a prefix, as here, or as a suffix, the letter X and a number provided quick identification of the unit in the air, enhanced by the lightning insignia on the tail and the red base to the engine cowl. The anti-glare panel fore and aft of the canopy was in Olive Drab.



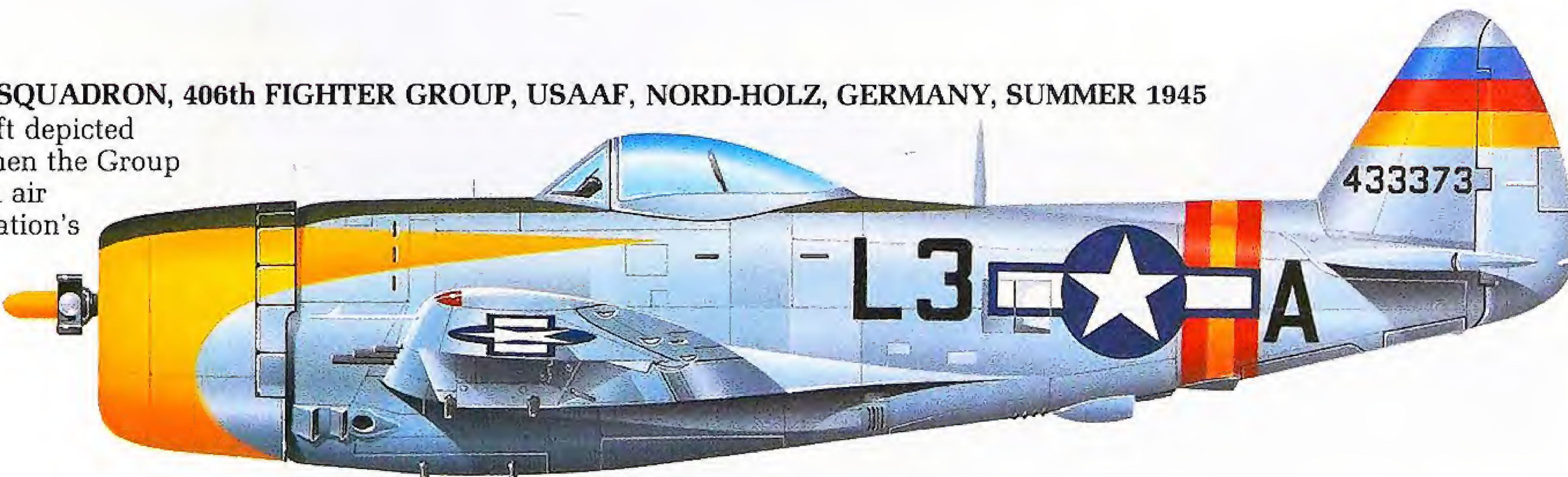
P-47M-1, 63rd FIGHTER SQUADRON, 56th FIGHTER GROUP, USAAF, BOXTED, UK, SPRING 1945

The fastest production "Jug" of all was the M with a top speed of 473mph at 32,000ft. The 56th was the last P-47-equipped unit in the 8th AF and received Ms in early 1945. Colors used by the 63rd FS were dark and light blue shadow shading with natural metal undersides and code letters. A medium blue was used for the serial number and rudder.



P-47D-30-RA, 512th FIGHTER SQUADRON, 406th FIGHTER GROUP, USAAF, NORD-HOLZ, GERMANY, SUMMER 1945

A natural metal-finished aircraft depicted after cessation of hostilities, when the Group was assigned to the occupation air forces and carried that organization's red-yellow-red fuselage band.

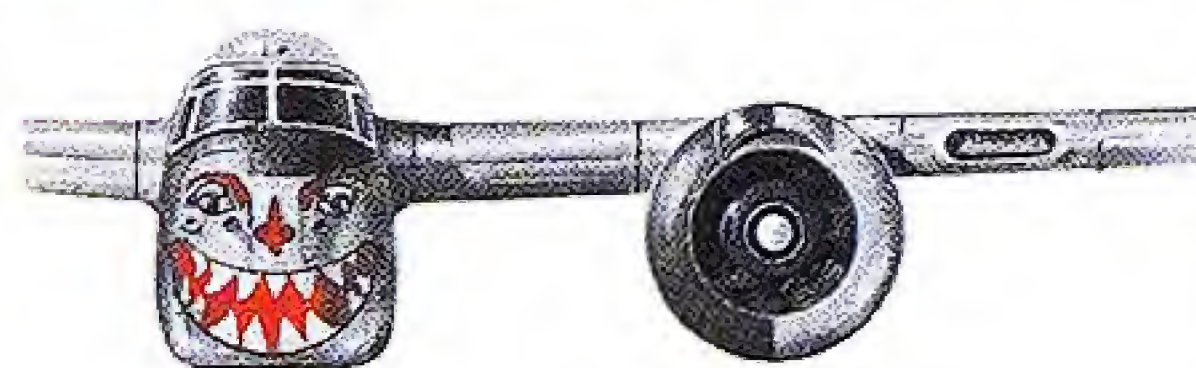


DOUGLAS A-26 INVADER

The Invader entered service towards the end of World War II and had its baptism of fire with units of the UK-based 9th AF. It was found to be fast and capable of carrying twice the specified bomb load. A range of gun armaments could be fitted to produce a formidable ground-attack aircraft. Main variants were the A-26B with a solid "gun" nose, and the A-26C with a glazed nose for a bombardier. In 1948 the A-26 was redesignated B-26 and later operated successfully in Korea and with the French in Indo-China and Algeria.

A-26B-15-DT, 552nd BOMB SQUADRON, 386th BOMB GROUP, 9th USAAF, BEAUMONT-SUR-OISE, FRANCE, APRIL 1945

"Stinky" is a natural metal-finished aircraft with black squadron codes (RG) and individual letter (A). Above the serial is the Group identity band which had previously been used when the unit operated B-26 Marauders.



The garish nose-art of "Stinky" is seen to full effect in this head-on view. To reduce glare from the engines, which were almost on a level with the pilot's eyes, the inboard surfaces of the cowlings were sprayed Olive Drab.

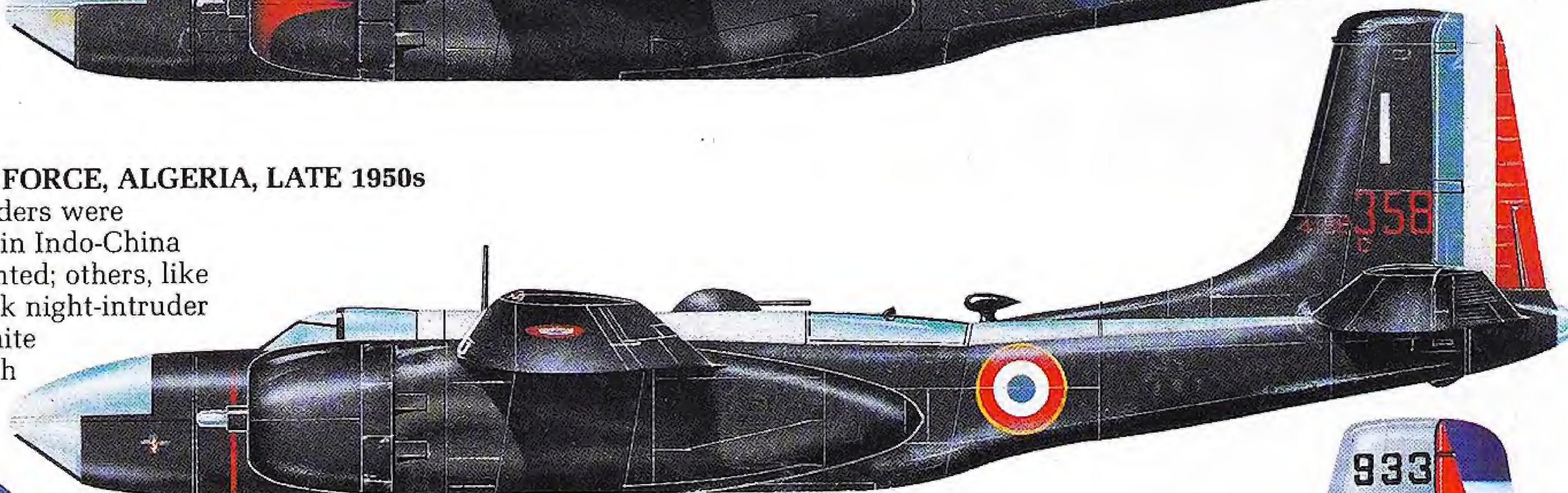
A-26B-55-DL, MISSOURI AIR NATIONAL GUARD, USAF, 1946

Built as a B but fitted with a C nose, this all-black intruder was one of a number of aircraft flown by the 180th and 110th Bomb Sqn. They were retained in service until 1957.



B-26C, GB 2/91, FRENCH AIR FORCE, ALGERIA, LATE 1950s

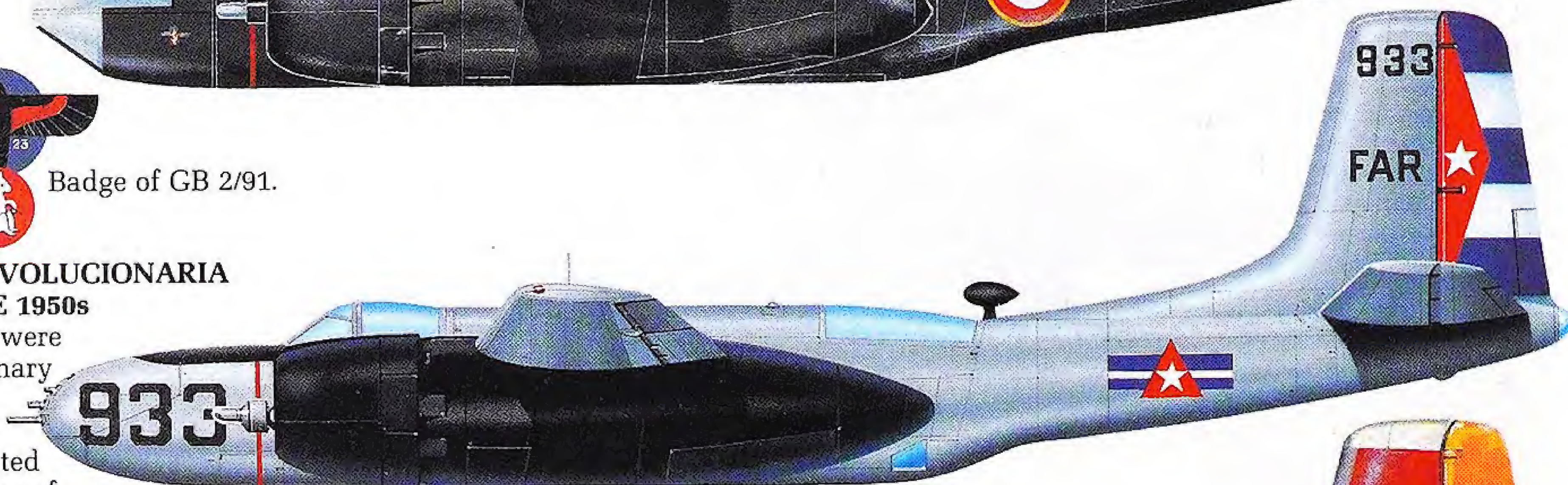
Numbers of surplus USAF Invaders were supplied to the French for use in Indo-China and Algeria. Some were unpainted; others, like this example, retained the black night-intruder scheme but with the added white fuselage top to help reduce high temperatures in the cabin.



Badge of GB 2/91.

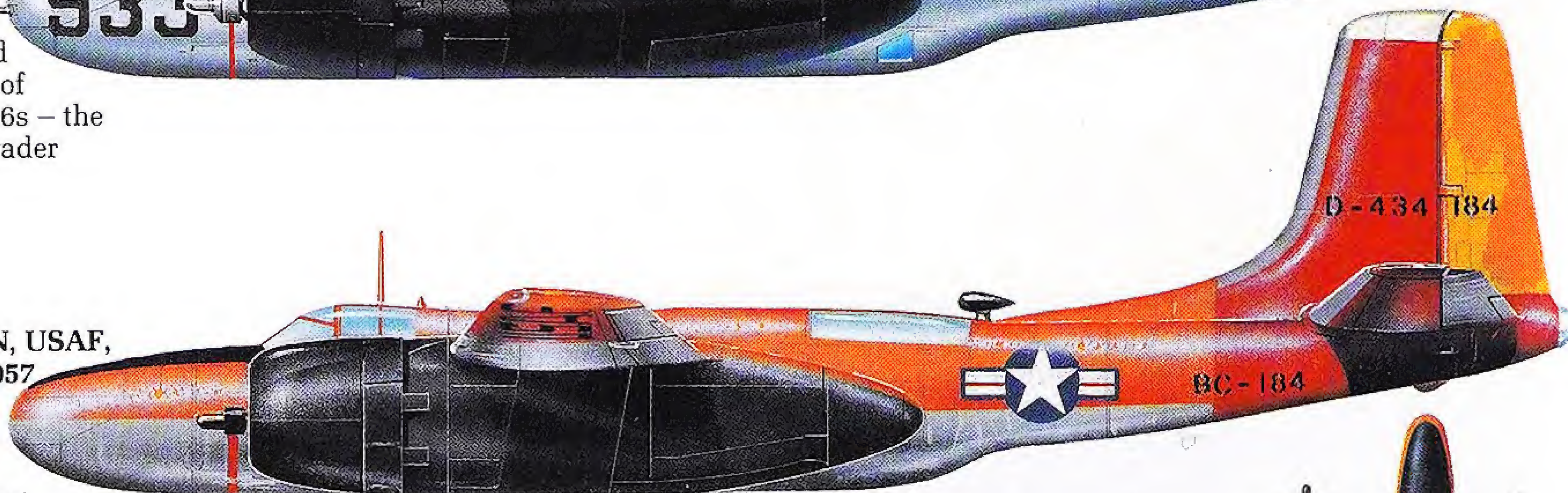
B-26C, FUERZA AEREA REVOLUCIONARIA (CUBAN AIR FORCE), LATE 1950s

Numbers of ex-USAF aircraft were supplied to the pre-revolutionary Cuban air arm, including some Invaders. When US-backed Cuban rebels attempted to oust Fidel Castro at the Bay of Pigs invasion, they too flew B-26s – the only known occasion when Invader fought Invader.

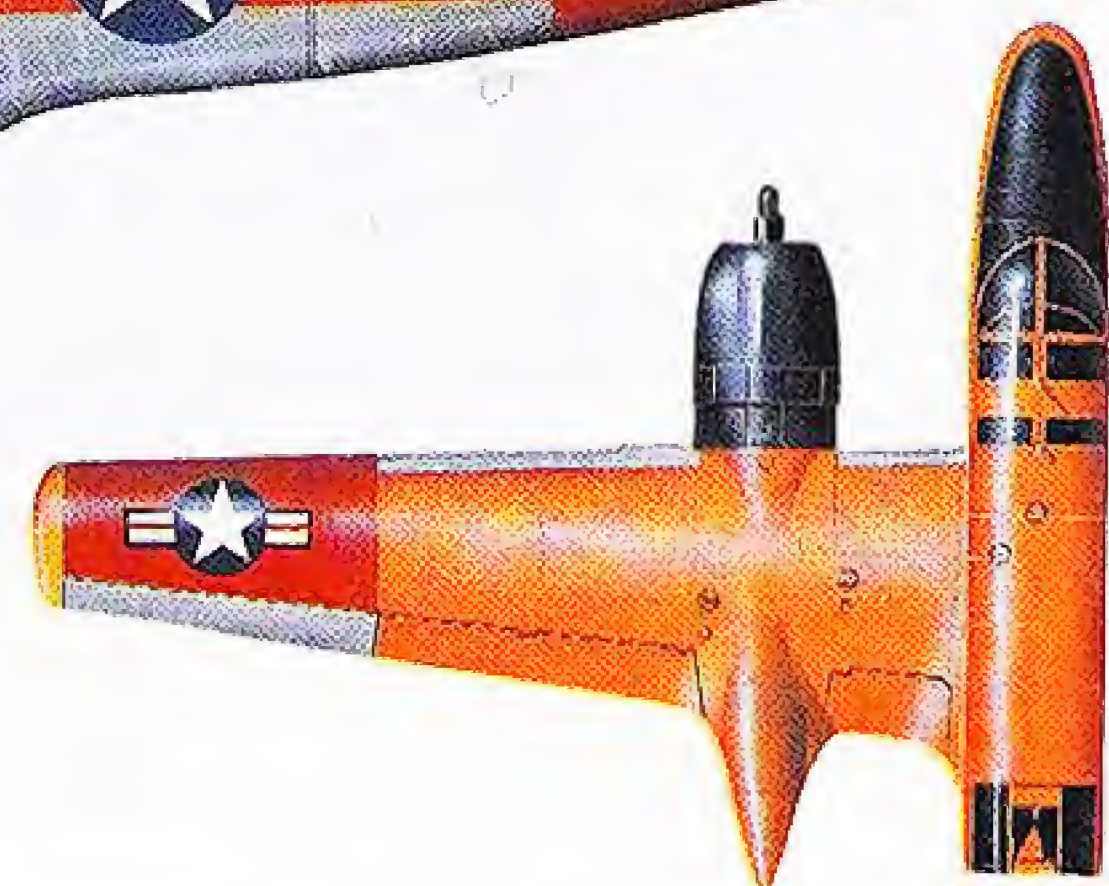


TB-26B, 4th TOW SQUADRON, USAF, LADD AFB, ALASKA, USA, 1957

A mixture of arctic red areas combined with orange target-tug colors makes this one of the more colorful Invaders to see service with a military arm. The engine cowlings and lower engine nacelles are sprayed black, probably wisely as the B-26 was noted for its extensive exhaust staining behind the gills.



Partial plan view showing the orange role-color and the arctic red outer wing panels.

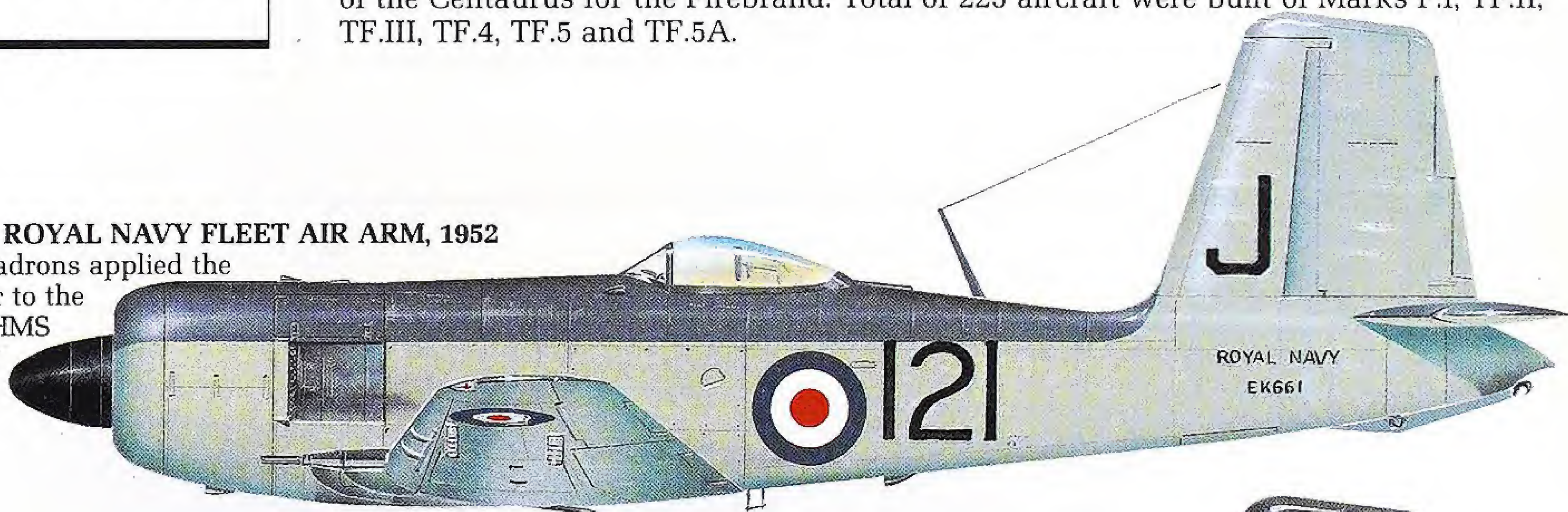


BLACKBURN FIREBRAND

Developed initially as a fighter, but ending up as a torpedo-carrying strike aircraft, the Firebrand spent most of the 1939–45 war on trials and only reached squadron service in 1945, too late to see action. The original engine was the Sabre, but problems and a decision to allocate all Sabre production to the Hawker Typhoon led to the adoption of the Centaurus for the Firebrand. Total of 225 aircraft were built of Marks F.I, TF.II, TF.III, TF.4, TF.5 and TF.5A.

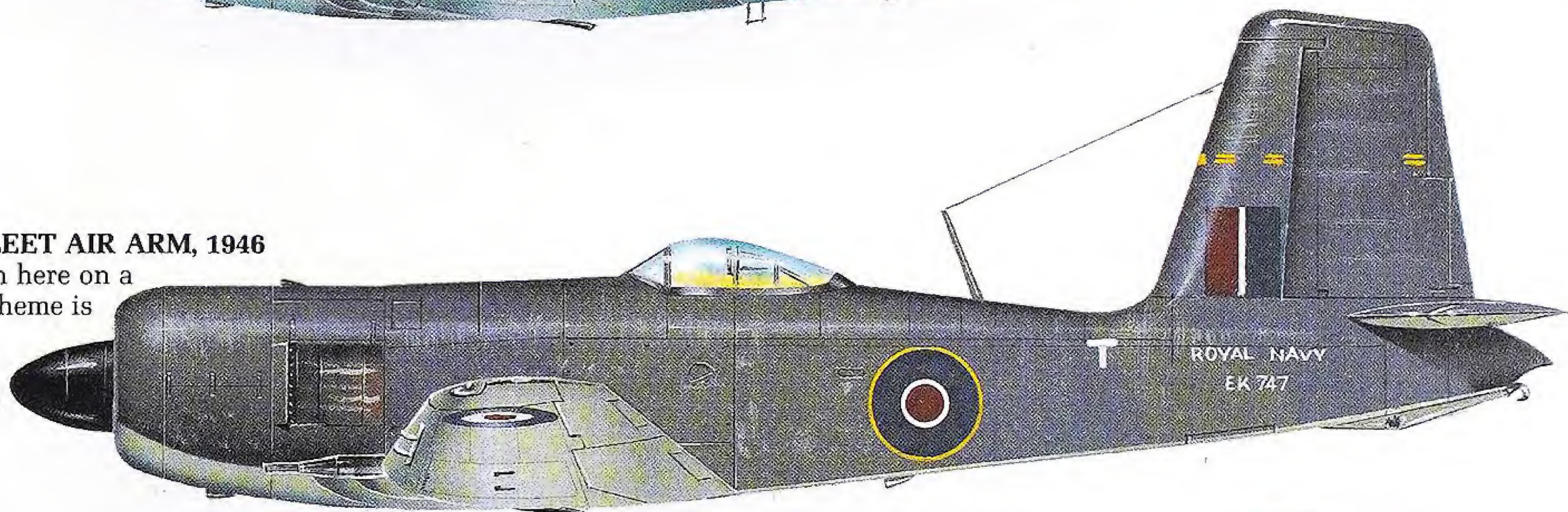
TF Mk 4, 813 SQUADRON, ROYAL NAVY FLEET AIR ARM, 1952

When embarked, FAA squadrons applied the carrier's identification letter to the fin, in this case J signified HMS Eagle. In 1953, 813 and 827 Squadrons relinquished their Firebrands for Westland Wyverns.



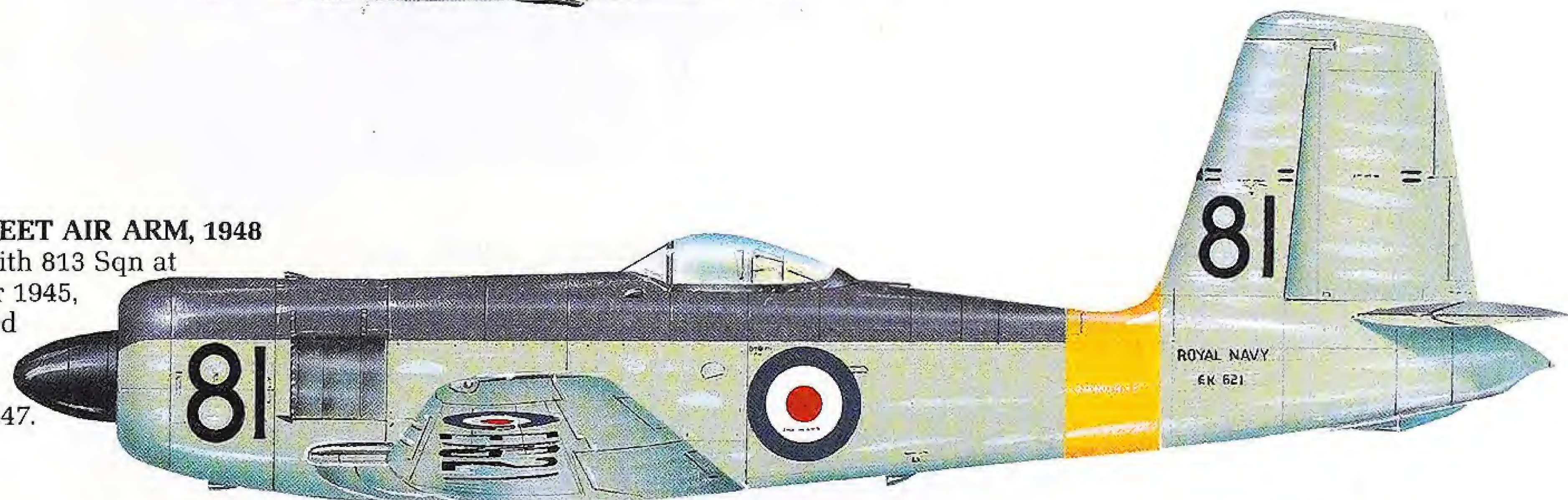
TF Mk 5, ROYAL NAVY FLEET AIR ARM, 1946

Wartime camouflage is seen here on a post-war Firebrand. The scheme is Dark Slate Gray and Extra Dark Sea Gray with 18in diameter fuselage roundels. This aircraft was scrapped in 1965.



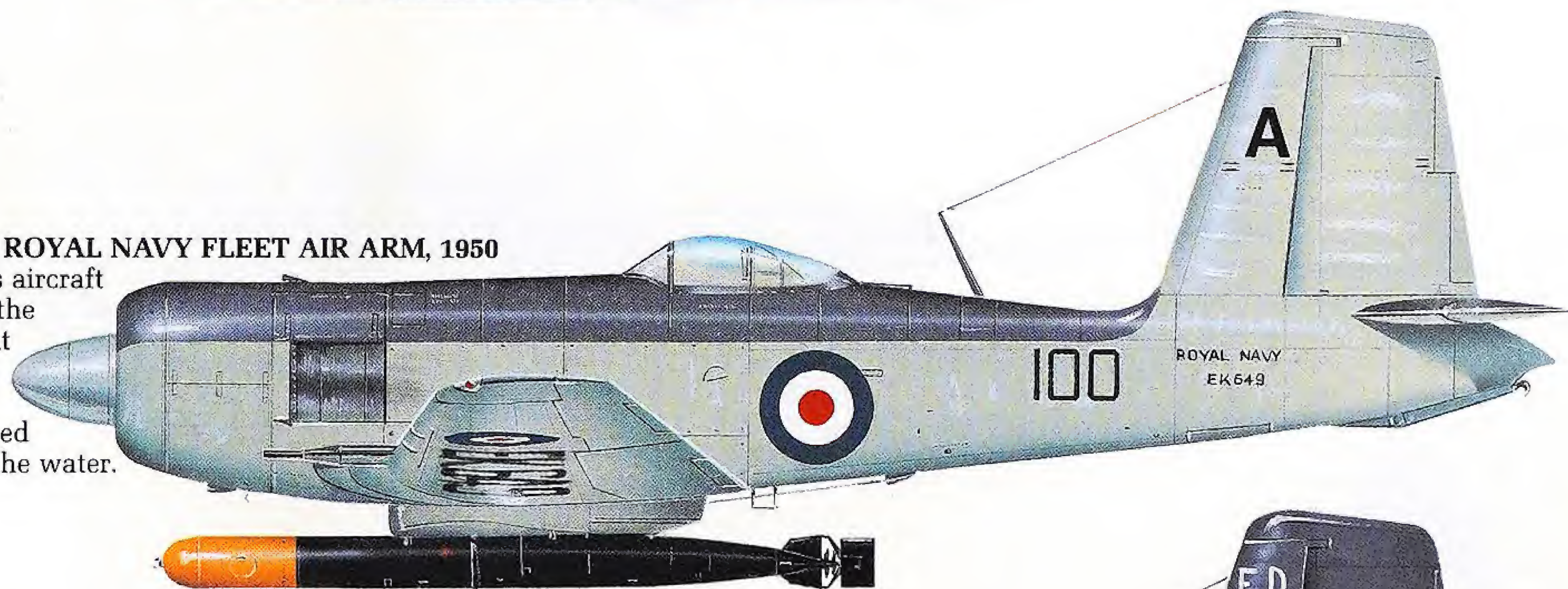
TF Mk 4, ROYAL NAVY FLEET AIR ARM, 1948

The Mk 4 entered service with 813 Sqn at RNAS Ford on 1 September 1945, subsequently serving aboard HMS Illustrious and Implacable. The finish was as laid down officially in 1947.



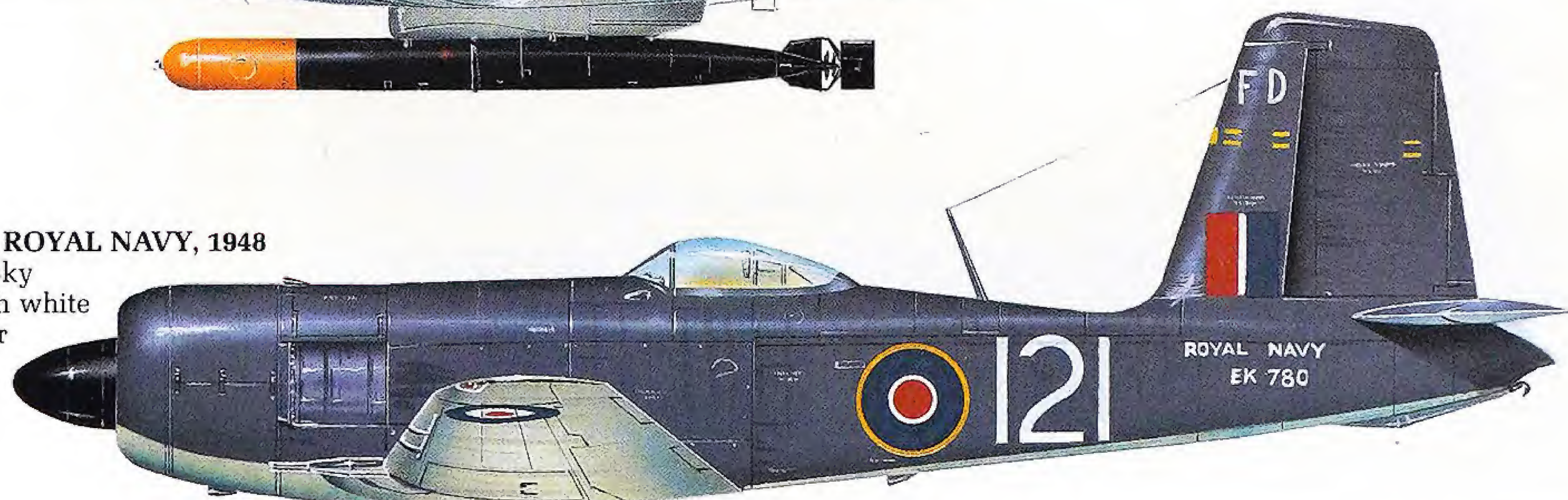
TF Mk 4, 813 SQUADRON, ROYAL NAVY FLEET AIR ARM, 1950

Based at Lee-on-Solent, this aircraft carries an 18in torpedo on the centerline weapon pylon. At the rear of the torpedo is a directional stabilizing assembly which was released when the weapon entered the water.



TF Mk 5, 813 SQUADRON, ROYAL NAVY, 1948

Extra Dark Sea Gray and Sky undersides are painted with white markings and a FD code for Ford Naval Air Station. This particular aircraft was scrapped in 1965.

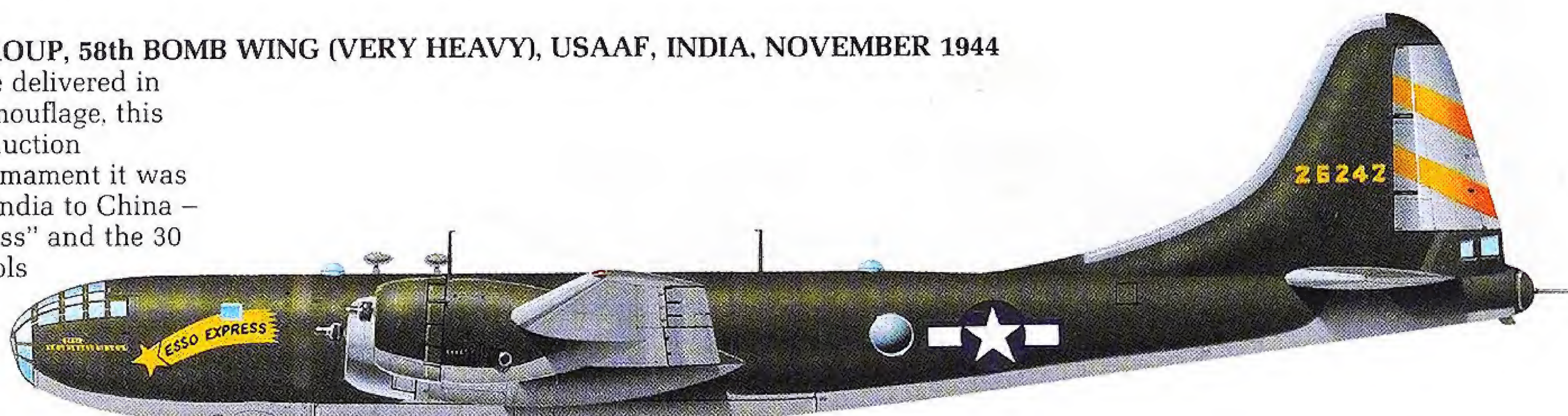


B-29 SUPER- FORTRESS

Best remembered as the aircraft that dropped the atomic bombs on Hiroshima and Nagasaki in 1945, the B-29 first flew on 21 September 1942 and became America's major weapon in the war against Japan's war industry. Bomb-load was a respectable 10 tons, while defensive armament in remote-controlled positions totaled 10 .50in and one 20mm cannon. Four factories had produced 3974 B-29s by the time the last was delivered in June 1946. Some flew with the RAF as the Washington, and both China and Russia produced pirated copies.

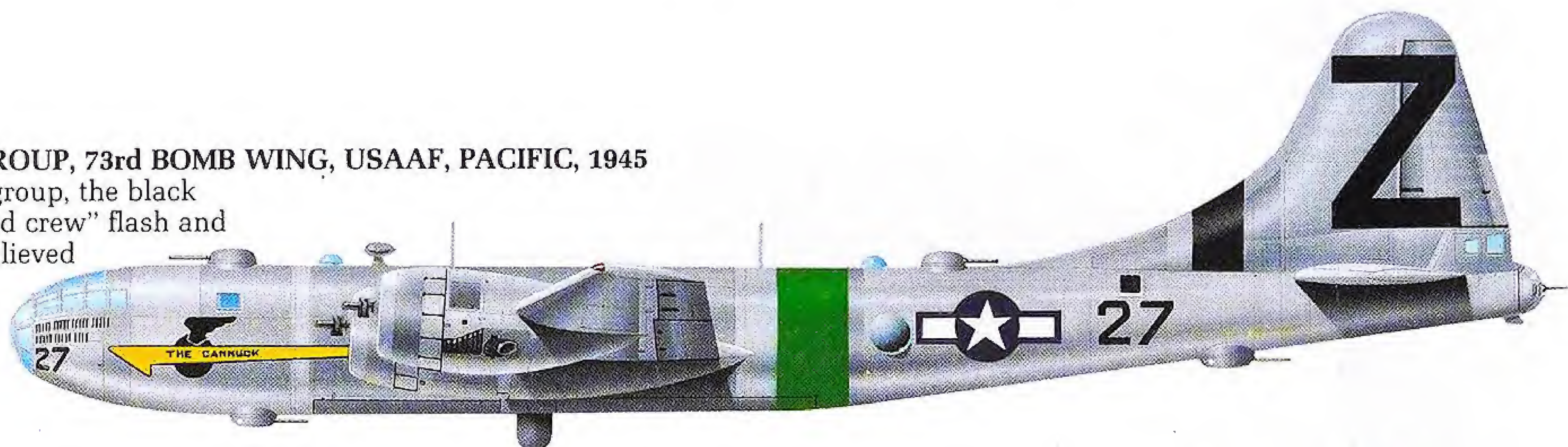
B-29-1-BW, 468th BOMB GROUP, 58th BOMB WING (VERY HEAVY), USAAF, INDIA, NOVEMBER 1944

Only very early aircraft were delivered in Olive Drab/Neutral Gray camouflage, this machine being the 29th production Superfortress. Stripped of armament it was used to transport fuel from India to China – hence the name “Esso Express” and the 30 camel-shaped mission symbols on the nose.



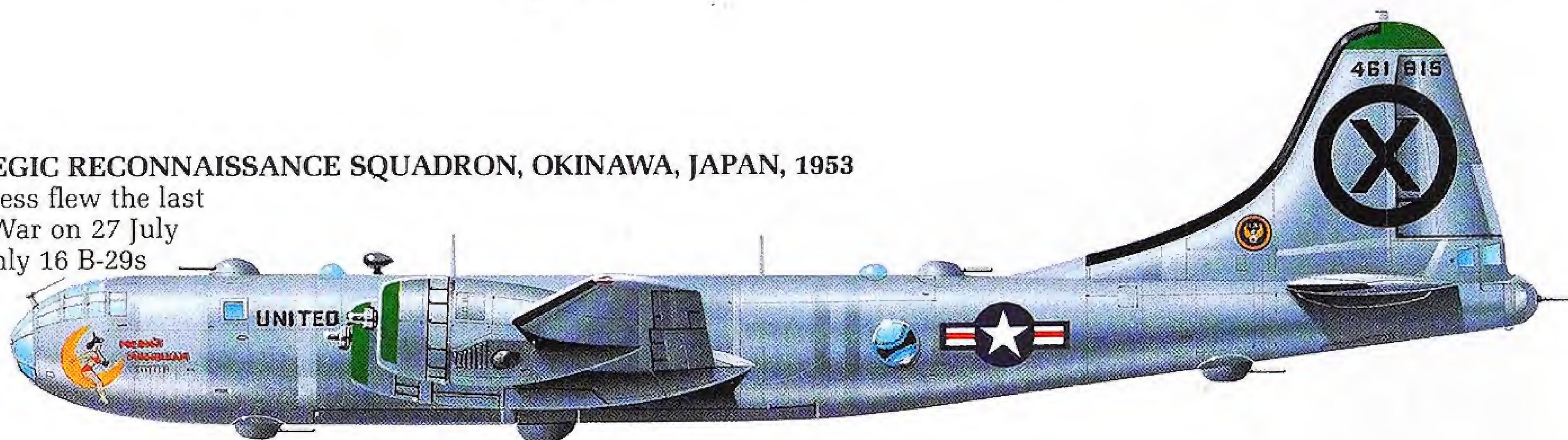
B-29-45-BW, 500th BOMB GROUP, 73rd BOMB WING, USAAF, PACIFIC, 1945

“Z” on the tail indicates the group, the black bar on the dorsal fin is a “lead crew” flash and the green fuselage band is believed to be a squadron indicator.



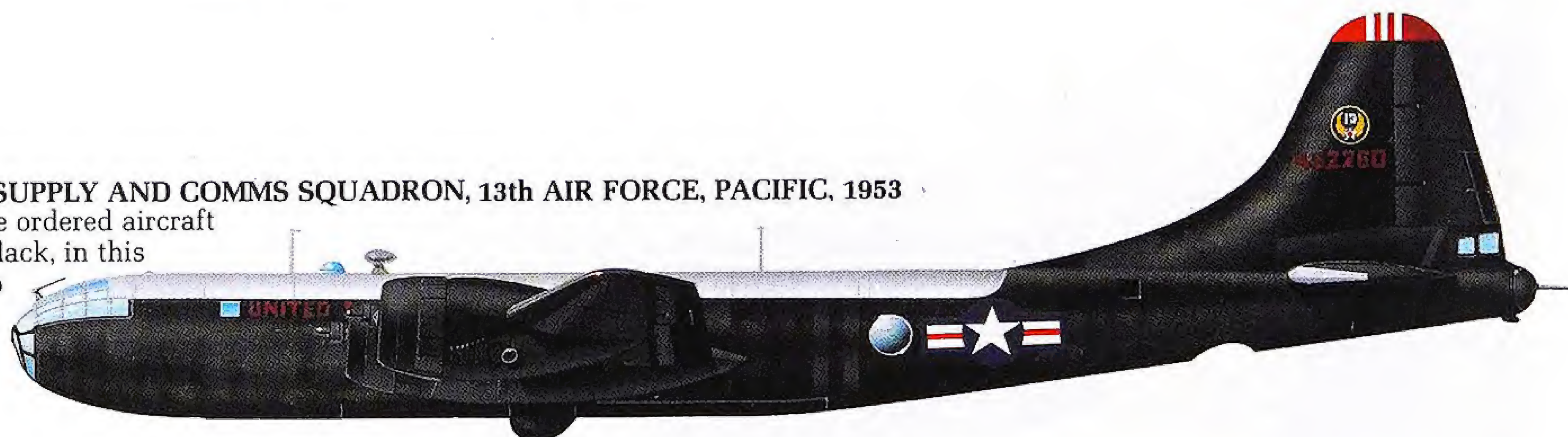
RB-29A-45-BN, 91st STRATEGIC RECONNAISSANCE SQUADRON, OKINAWA, JAPAN, 1953

A reconnaissance Superfortress flew the last B-29 mission of the Korean War on 27 July 1953. Over the three years only 16 B-29s were lost to North Korean fighters, four to AA fire and 14 to other operational causes: not bad for a 10-year-old bomber up against jet-powered MiGs.



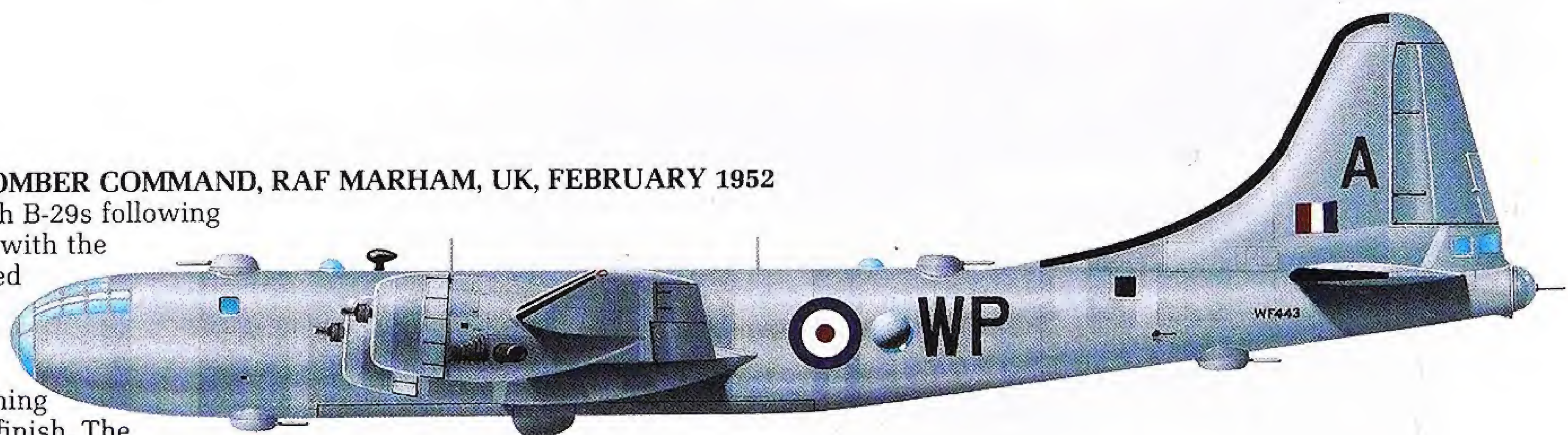
B-29A-70-BN, 581st AIR RESUPPLY AND COMMS SQUADRON, 13th AIR FORCE, PACIFIC, 1953

When night operations were ordered aircraft received a matt coating of black, in this case covering all but the top of the fuselage, with all lettering in red. This stripped aircraft has retained only the tail gun; it was flown on clandestine missions over Manchuria in the last year of the Korean War.



B Mk 1, 90 SQUADRON, BOMBER COMMAND, RAF MARHAM, UK, FEBRUARY 1952

Appropriately equipped with B-29s following the unit's brief involvement with the B-17 in 1941, 90 Sqn operated the type as the Washington from January 1951 to December 1953. Eight RAF units flew the aircraft, retaining them in their natural metal finish. The RAF received 89 Washingtons.

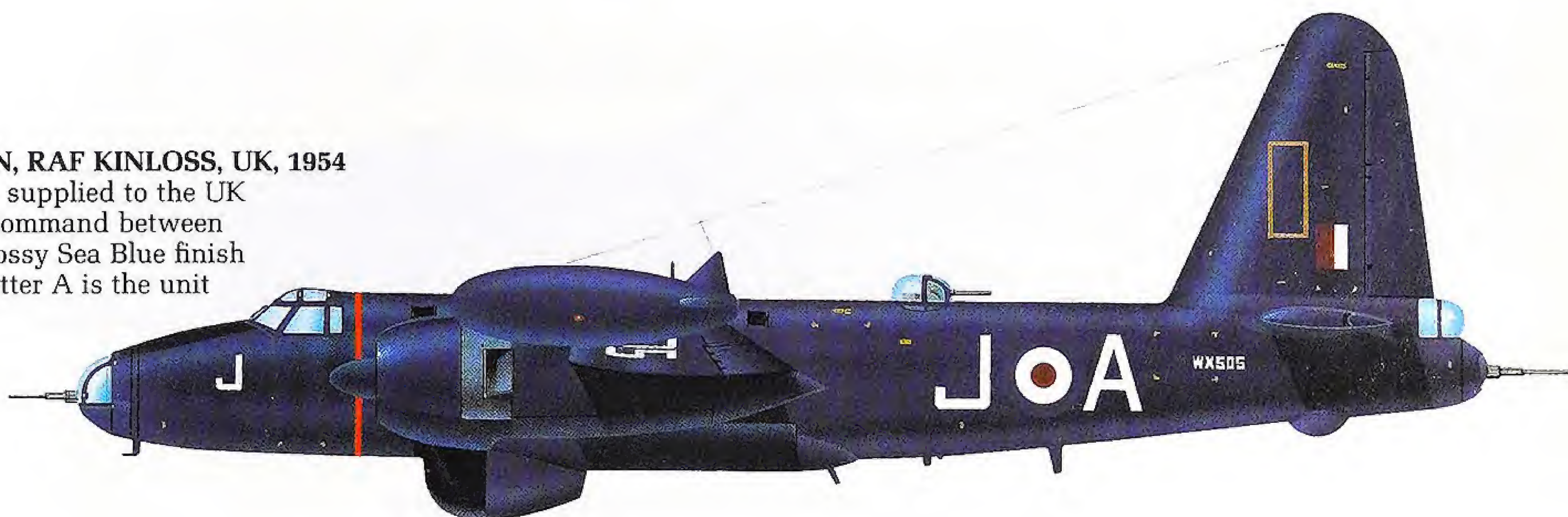


LOCKHEED NEPTUNE

A refined turboprop version of the Neptune is still operational with the Japanese Maritime air arm, more than 40 years after the prototype's first flight in May 1945. There were seven major variants with production reaching 1051, 838 for the US Navy and the rest for Allied and friendly countries. Early P2V designation gave way to P-2 series from 1962. Late production aircraft had their piston engines supplemented by underwing jet pods. The RAF designation was Neptune MR Mk 1.

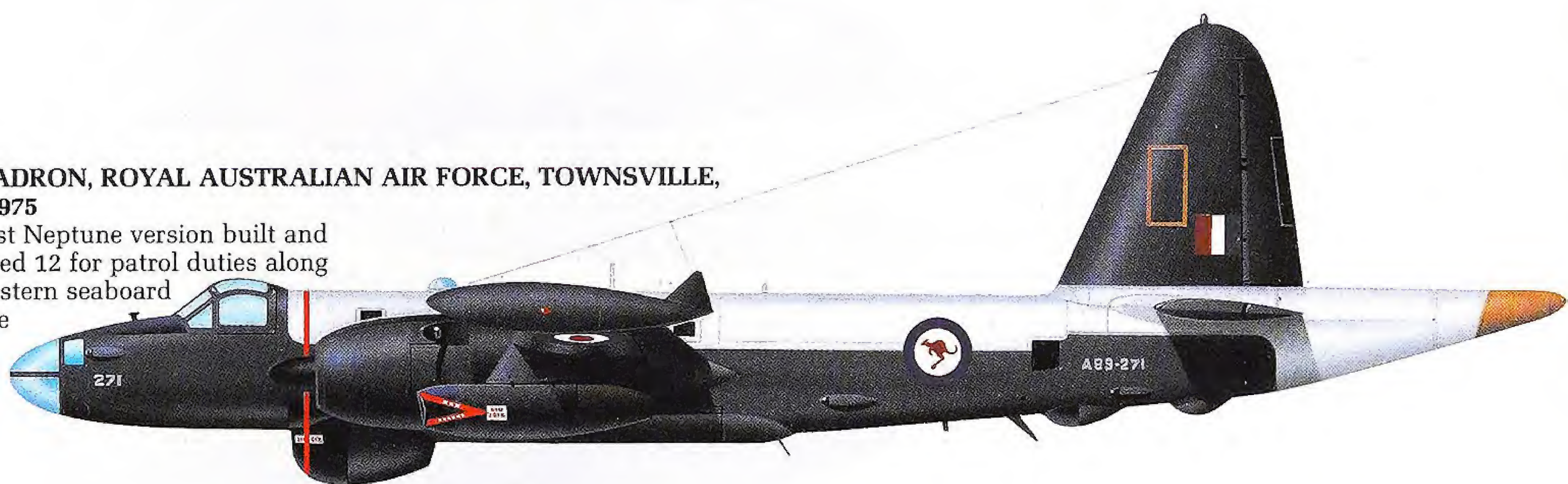
MR Mk 1, 217 SQUADRON, RAF KINLOSS, UK, 1954

One of 52 P2V-5 Neptunes supplied to the UK and operated by Coastal Command between 1952 and 1957. The US Glossy Sea Blue finish was retained. The single letter A is the unit code.



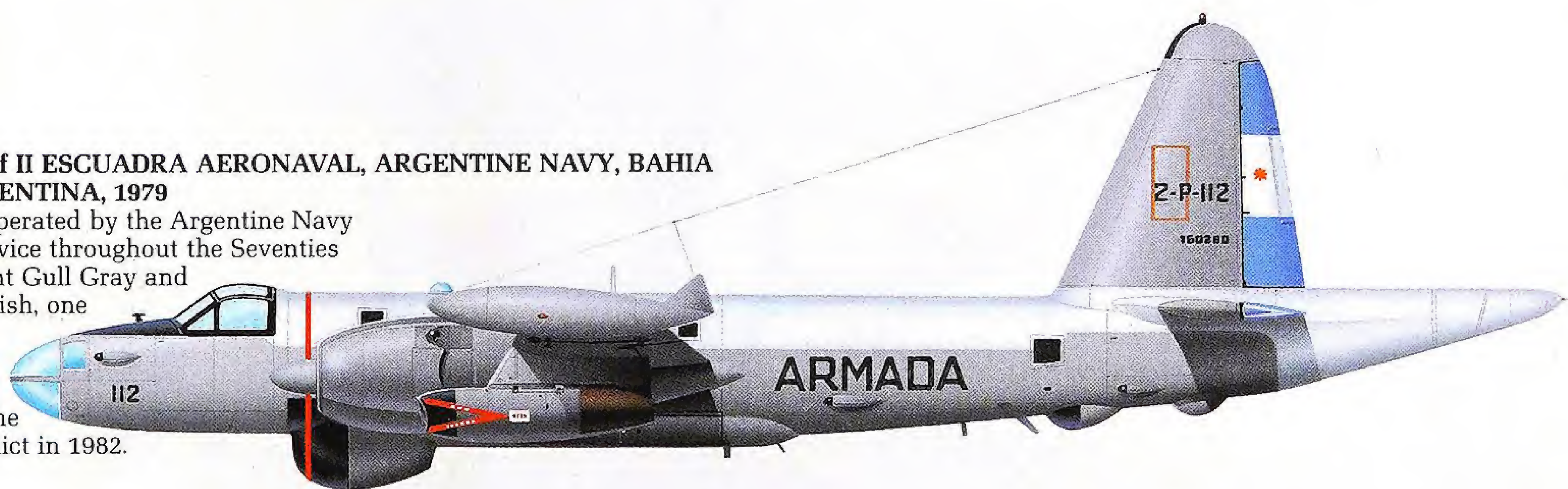
SP-2H, 10 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, TOWNSVILLE, AUSTRALIA, 1975

This was the last Neptune version built and Australia received 12 for patrol duties along the country's eastern seaboard before they were replaced by Electras from 1977.



SP-2H, 1 ESC. of II ESCUADRA AERONAVAL, ARGENTINE NAVY, BAHIA BLANCA, ARGENTINA, 1979

Six Neptunes operated by the Argentine Navy remained in service throughout the Seventies in the USN Light Gull Gray and Gloss White finish, one surviving in a medium gray color to fly briefly during the Falklands Conflict in 1982.



AP-2H, VAH-21, US NAVY, CAM RANH BAY, SOUTH VIETNAM, 1968

Four of these highly modified aircraft were used to monitor sections of the Ho Chi Minh Trail using electronic sensors. The color scheme is a matt Dark Gull Gray, Light Gull Gray and Mixed Gray (50-50 Light and Dark Gull Gray).

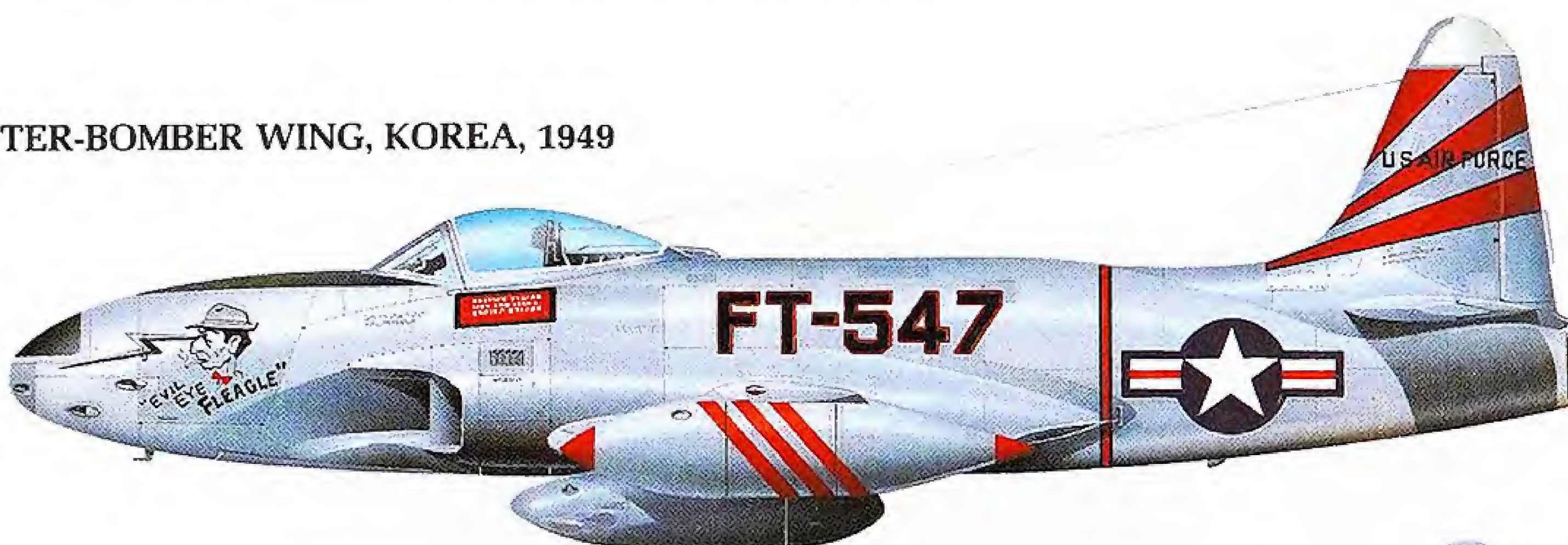


LOCKHEED P-80

The first practical jet combat aircraft accepted into USAAF service, the P-80 (later F-80) Shooting Star saw action in Korea, operating with considerable success in the fighter-bomber role. The prototype took less than 20 weeks to build and flew on 8 January 1944, powered by a British de Havilland H-1 turbojet. From the P-80 stemmed the reconnaissance RF-80, T-33 two-seat trainer, F-94 Starfire and T2V Seastar deck-landing carrier trainer. P-80 production totaled 1718.

F-80C, 36th FIGHTER-BOMBER SQUADRON, 8th FIGHTER-BOMBER WING, KOREA, 1949

This aircraft carries a typical Korean War scheme of a polished natural metal with an Olive Drab anti-glare panel in front of cockpit. This aircraft is believed to have carried the name "Miss Barbara Ann" on the other side of the nose.



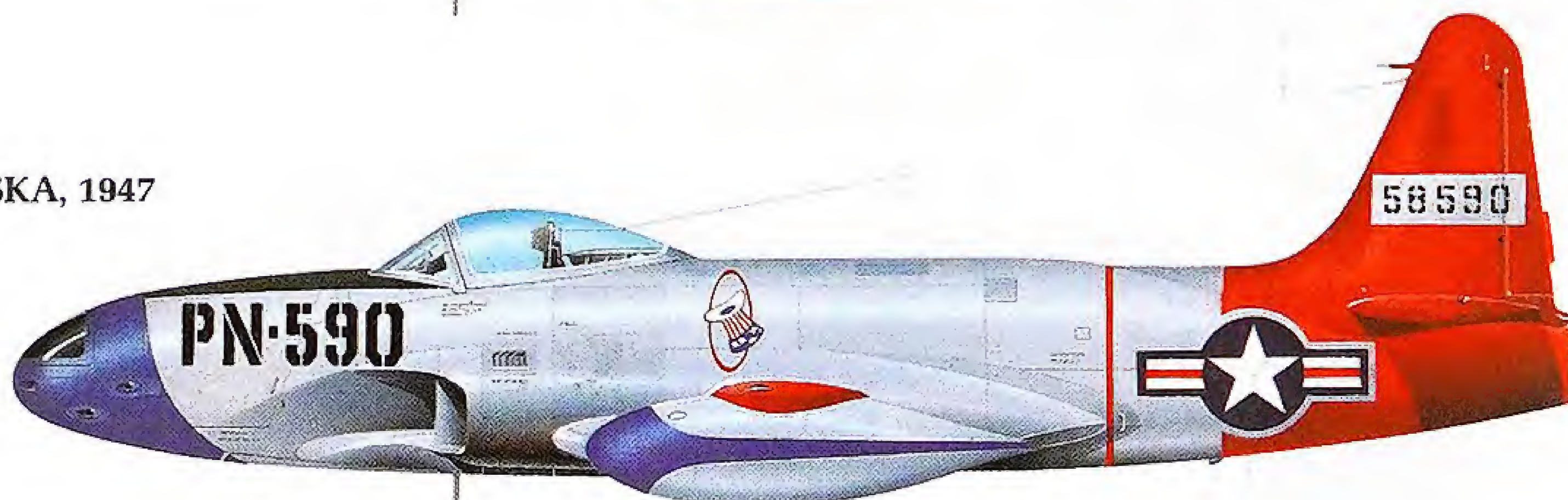
F-80A, 62nd FIGHTER SQUADRON, 56th FIGHTER GROUP, WEST GERMANY, JULY 1948

Deployed in response to the Soviet blockade of Berlin, this unit was famous as a P-47 Thunderbolt Group in World War II. The red line around the fuselage was a "break-point" for detaching the rear fuselage for maintenance.

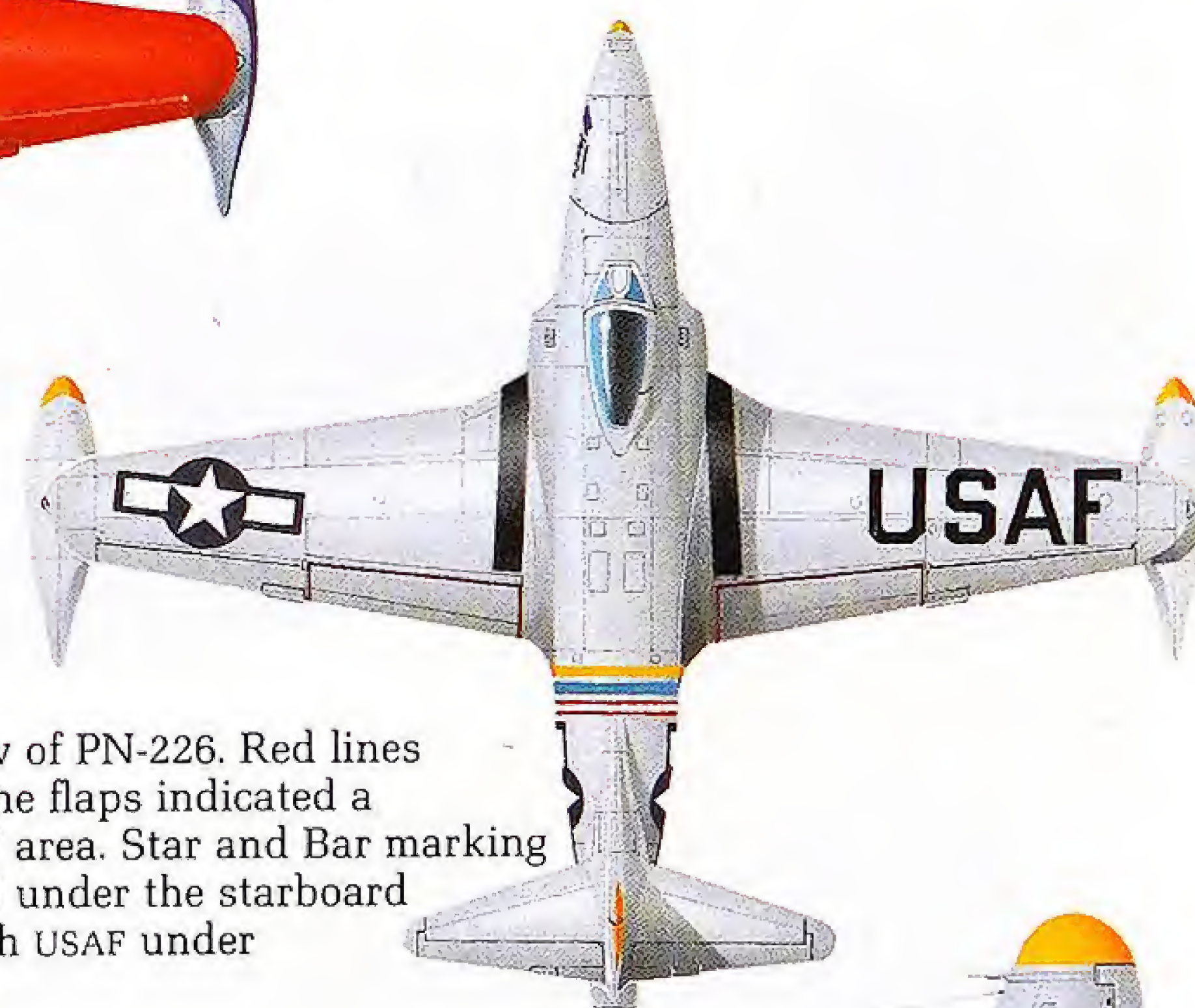


F80B, 94th FIGHTER SQUADRON, LADD FIELD, ALASKA, 1947

Famous as the "Hat-in-a-Ring" unit. The aircraft carries a "Buzz" number prefixed P signifying Pursuit, changed in June 1948 to F for Fighter.



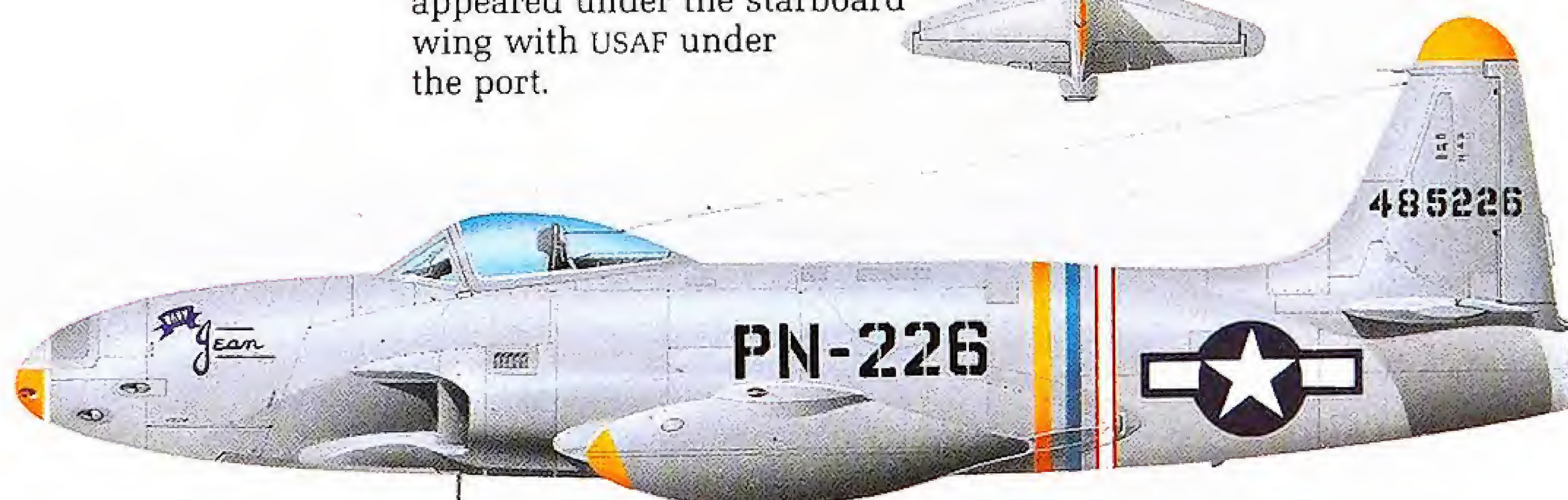
The plan view shows the extent of the use of red paint for deployment to Alaska. It was applied as a rescue aid in the event of an accident and echoes the SAR helicopter schemes of today.



Plan view of PN-226. Red lines around the flaps indicated a "no step" area. Star and Bar marking appeared under the starboard wing with USAF under the port.

P-80A, 412th FIGHTER GROUP, 1946

Immediate post-war period finish of glossy light gray overall. Believed to be the squadron commander's aircraft due to the multi-colored fuselage bands. The red had yet to reappear in the national insignia.

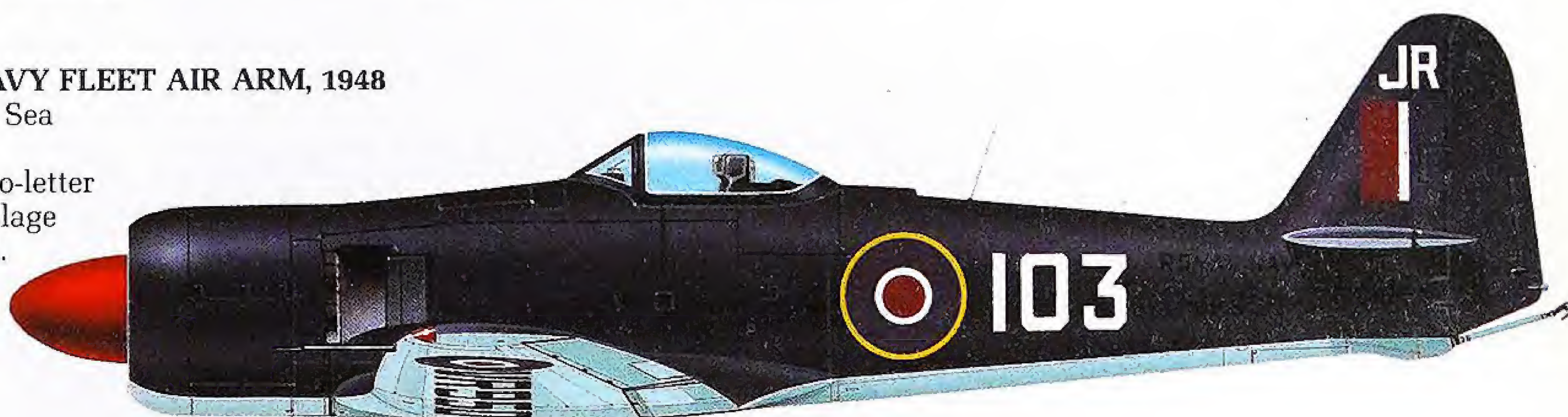


HAWKER FURY

Developed during World War II for the RAF and Royal Navy, the Centaurus-powered Fury and Sea Fury single-seat fighters suffered under post-war cut-backs and only the latter type entered UK service. Korea provided the proving-ground for this fighter (Mk X) turned fighter-bomber (FB.II) and it acquitted itself well – even against North Korean MiG-15 jets. The Fury was exported to a number of countries and a 2-seat T. 20 was also produced. Total production was 864.

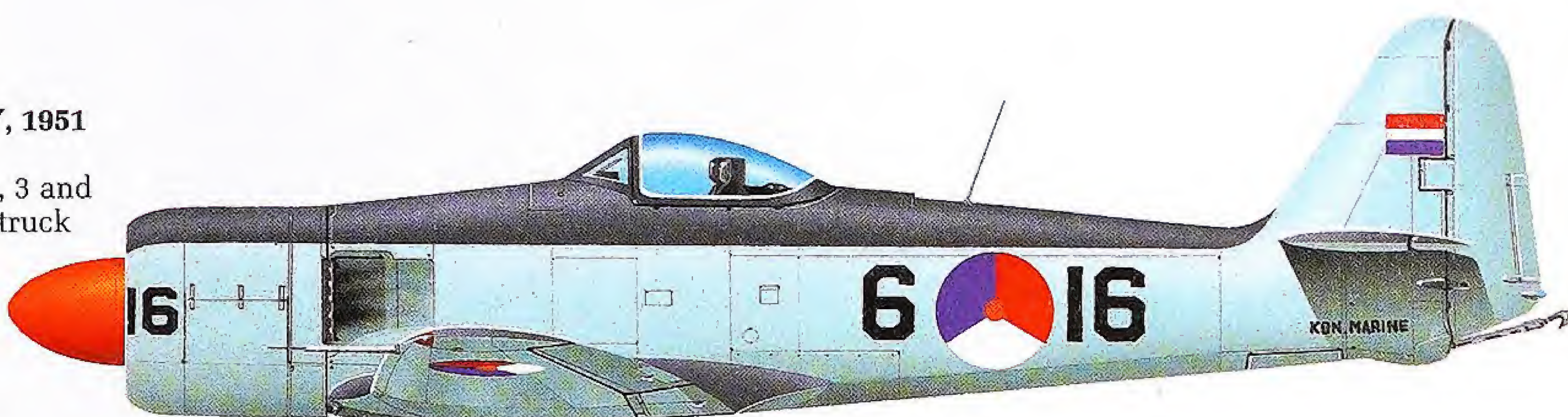
FB Mk II, 805 SQUADRON, ROYAL NAVY FLEET AIR ARM, 1948

The FAA aircraft is painted Extra Dark Sea Gray with Sky undersurfaces and an individual aircraft number (103) and two-letter station code (JR Eglinton). The rear fuselage serial and ROYAL NAVY were 4in high.



Mk 50, ROYAL NETHERLANDS NAVY, 1951

47 aircraft received from the UK and Fokker production and operated with 1, 3 and 860 Squadrons. The final aircraft was struck off charge in January 1959. Overall finish was the same as for Royal Navy operated aircraft.



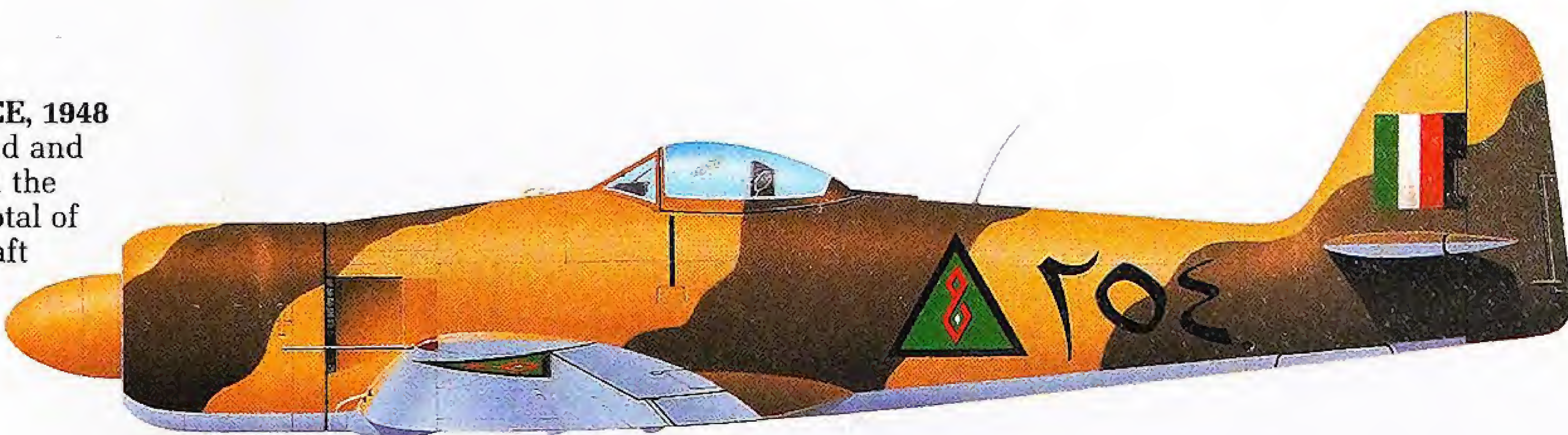
FB Mk 11, CUBAN REVOLUTIONARY AIR FORCE, 1960

Fifteen ex-Royal Navy aircraft were delivered to the Castro Government in 1959 including two 2-seaters. All the markings and camouflage was applied locally. FAR on the fin refers to Fuerza Aerea Revolucionaria.



"BAGHDAD" FURY, IRAQI AIR FORCE, 1948

All painted in desert camouflage of sand and stone with Arabic style number behind the national marking (254 in this case), a total of 55 single seat and five two-seater aircraft was delivered between 1948 and 1953.



Mk 60, PAKISTAN AIR FORCE, 1950

The largest export order for Furies was for 93 Mk 60s and five Mk 61 trainers for Pakistan, delivered between 1949 and 1954. The unit badge and squadron leader's pennant can be seen under the cockpit.





The Cold War Years

1945-1961

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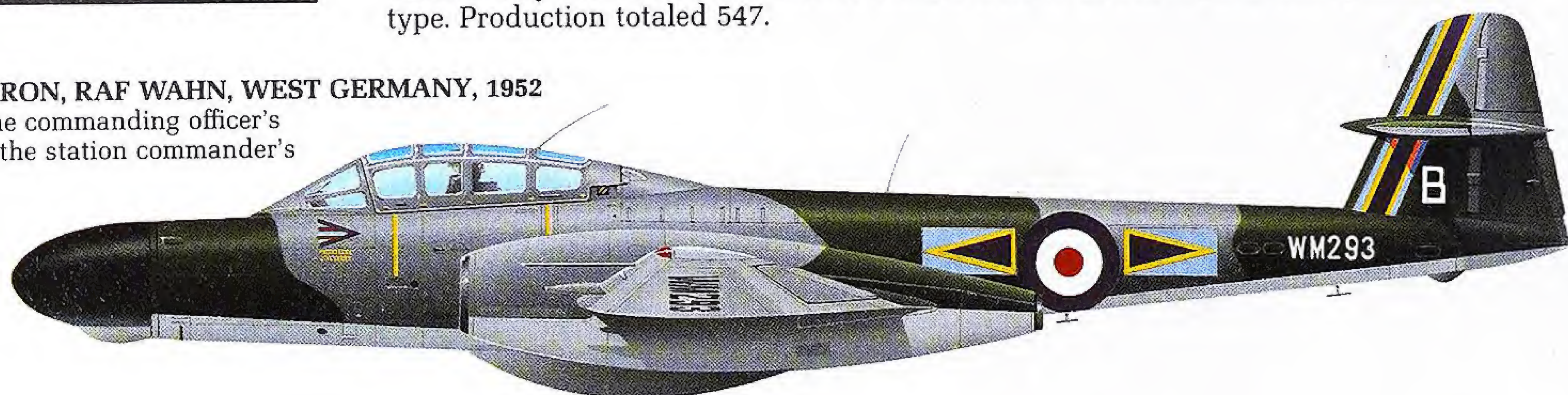


A.W. METEOR

Using the Meteor T.7 trainer as the basis of the design, Armstrong Whitworth produced a night fighting version of the single-seat Meteor day fighter, designated NF.11. Armament was moved to the wings and the extended nose housed radar and a second seat for the radar operator. The first flight was on 23 December 1948, with initial deliveries to 29 Squadron at Tangmere in 1950. The NF.12, 13 and 14 were successively introduced into service until a total of 19 RAF squadrons operated the type. Production totaled 547.

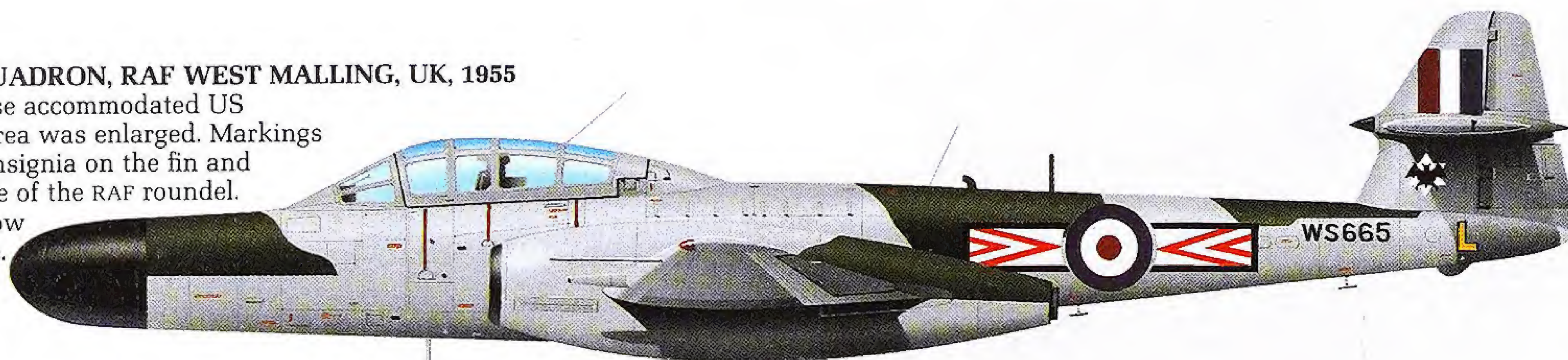
NF. Mk 11, 68 SQUADRON, RAF WAHN, WEST GERMANY, 1952

This aircraft carries the commanding officer's stripes on the fin and the station commander's pennant on the nose.



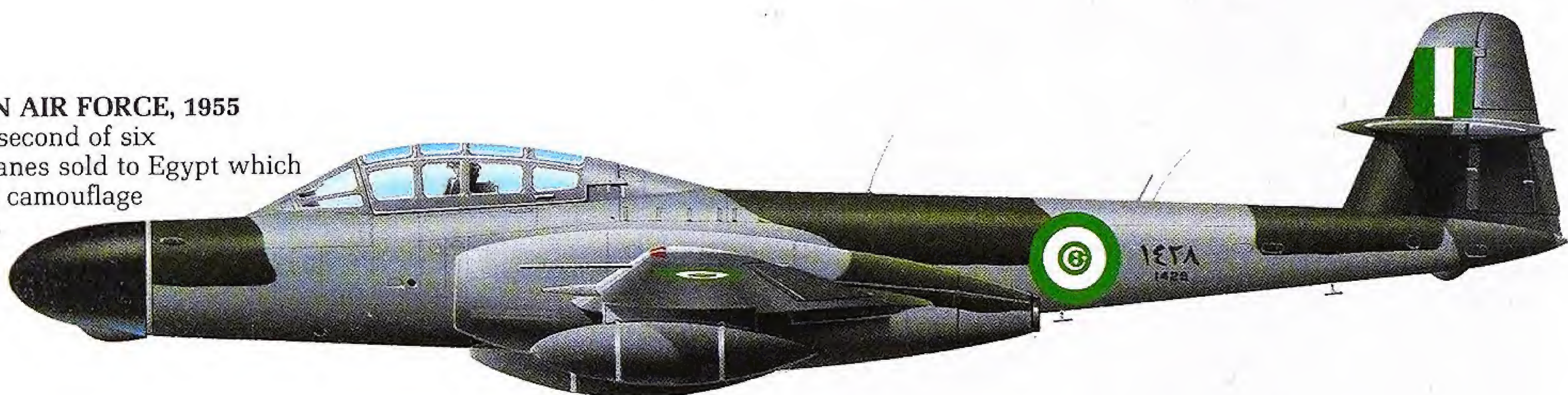
NF. Mk 12, 153 SQUADRON, RAF WEST MALLING, UK, 1955

The lengthened nose accommodated US radar and the fin area was enlarged. Markings included bat unit insignia on the fin and chevrons either side of the RAF roundel. Note the 'L' in yellow below the tailplane.



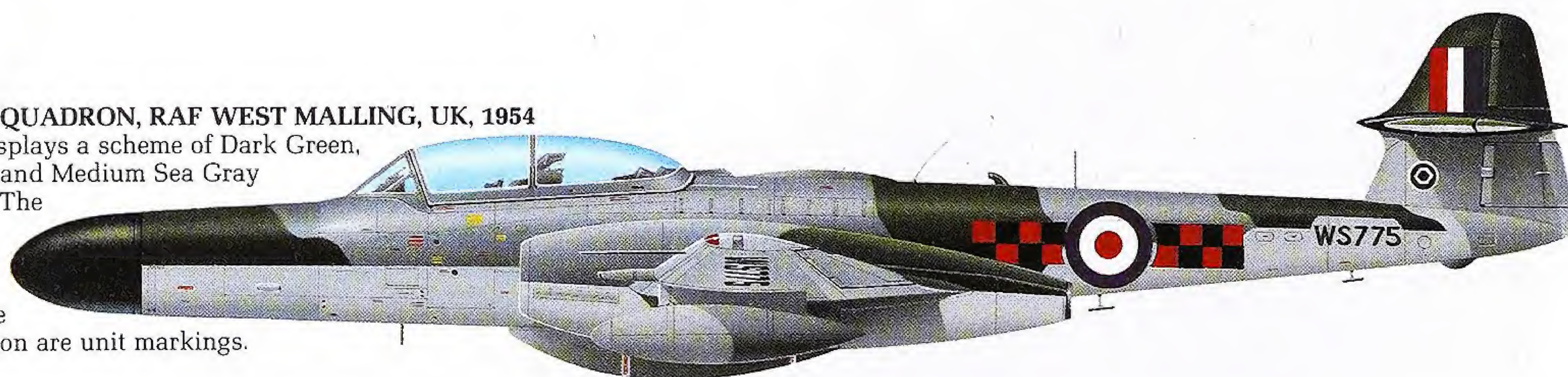
NF. Mk 13, EGYPTIAN AIR FORCE, 1955

This aircraft was the second of six refurbished ex-RAF planes sold to Egypt which retained their original camouflage whilst in EAF service.



NF. Mk 14, 85 SQUADRON, RAF WEST MALLING, UK, 1954

This aircraft displays a scheme of Dark Green, Dark Sea Gray and Medium Sea Gray undersurfaces. The checkerboard either side of the fuselage roundel and the tailplane hexagon are unit markings.



TT. Mk 20, ROYAL NAVY FLEET REQUIREMENTS UNIT, HAL FAR, MALTA, EARLY 1960s

This carries base codes on the fin and a serial number (WD 785) under the tailplane. There is a wind-driven target sleeve winch above the starboard wing.

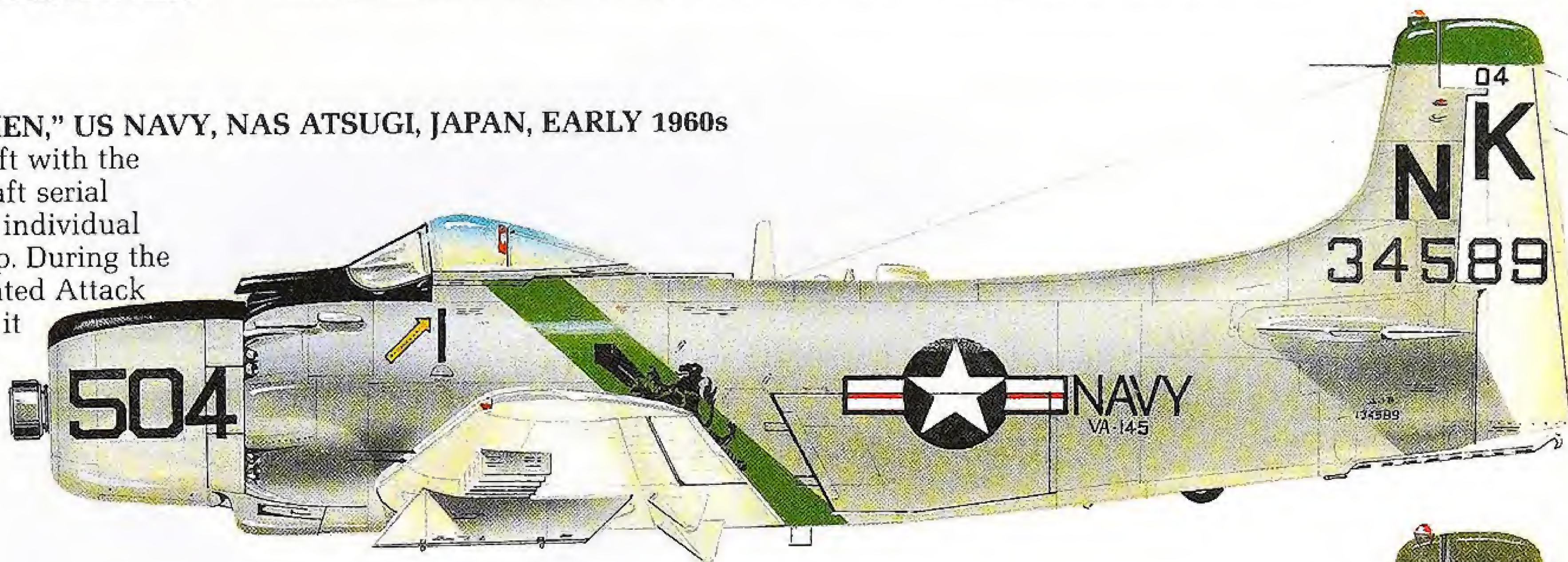


DOUGLAS AD- SKYRAIDER

Just too late for World War II, the Skyraider or "Spad" came from the drawing board of that great designer Ed Heinemann, chief engineer of Douglas El Segundo. Initially called the AD-1 and later A-1, this robust machine, which had a 10-hour endurance and seven weapon pylons each side, was the largest single seat production aircraft when it entered service in 1947. Such was its flexibility that the later AD-5 (A-1E) incorporated a larger cockpit for two crew. Total production was 3180.

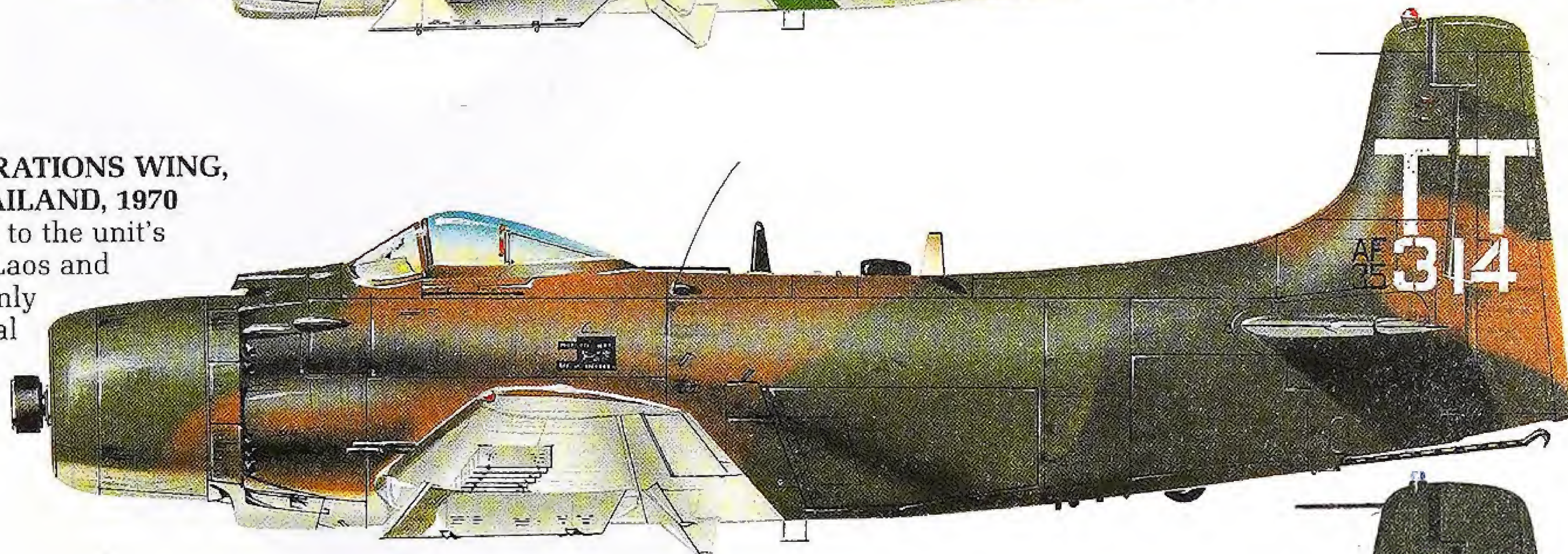
A-1H (AD-6), VA-145 "SWORDSMEN," US NAVY, NAS ATSUGI, JAPAN, EARLY 1960s

Gloss Gull Gray and White aircraft with the unit badge on a green band, aircraft serial number beneath the code and the individual number (04) repeated on the fin tip. During the Korean War this unit was designated Attack Squadron 702, flying early AD-1s; it became VA-145 in late 1952 and took later "Spads" to Vietnam in 1964.



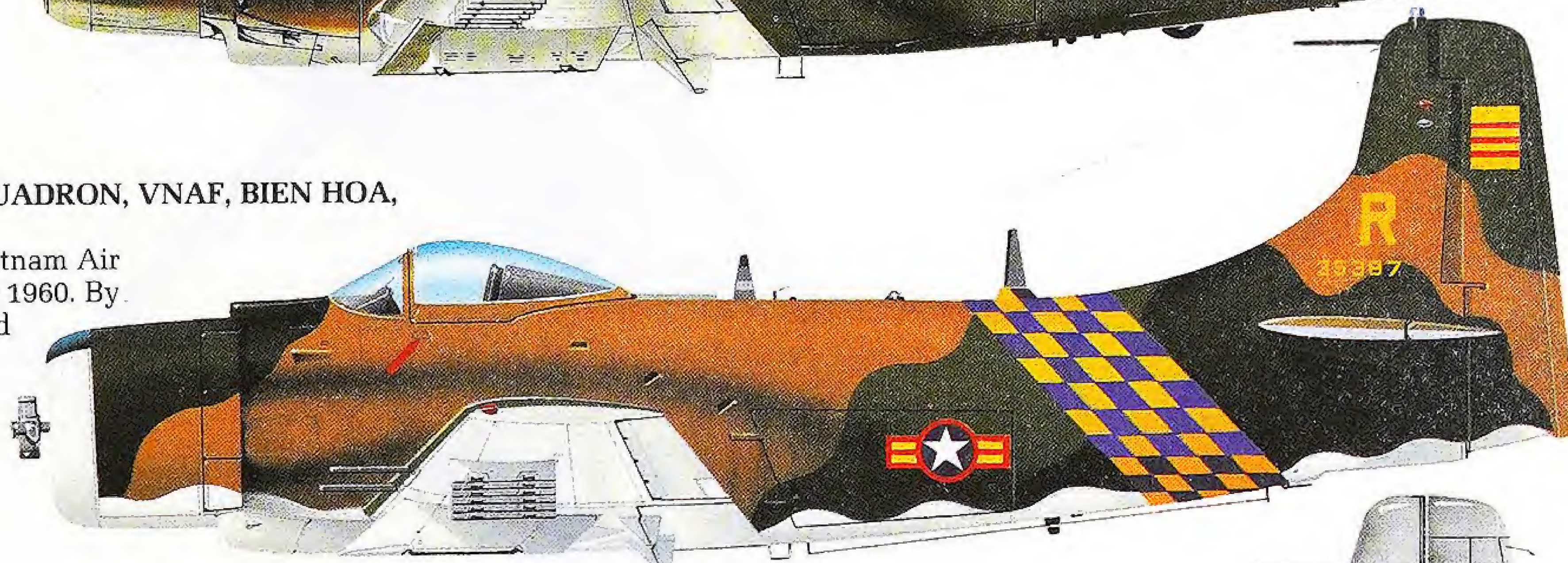
A-1H (AD-6), 56th SPECIAL OPERATIONS WING, NAKHON PHANOM, USAF, THAILAND, 1970

Devoid of national insignia owing to the unit's then-unpublicized missions over Laos and Cambodia, this machine retains only the airfield code (TT) and the serial number (135314). Standard SE Asia camouflage of two greens, tan and light gray.



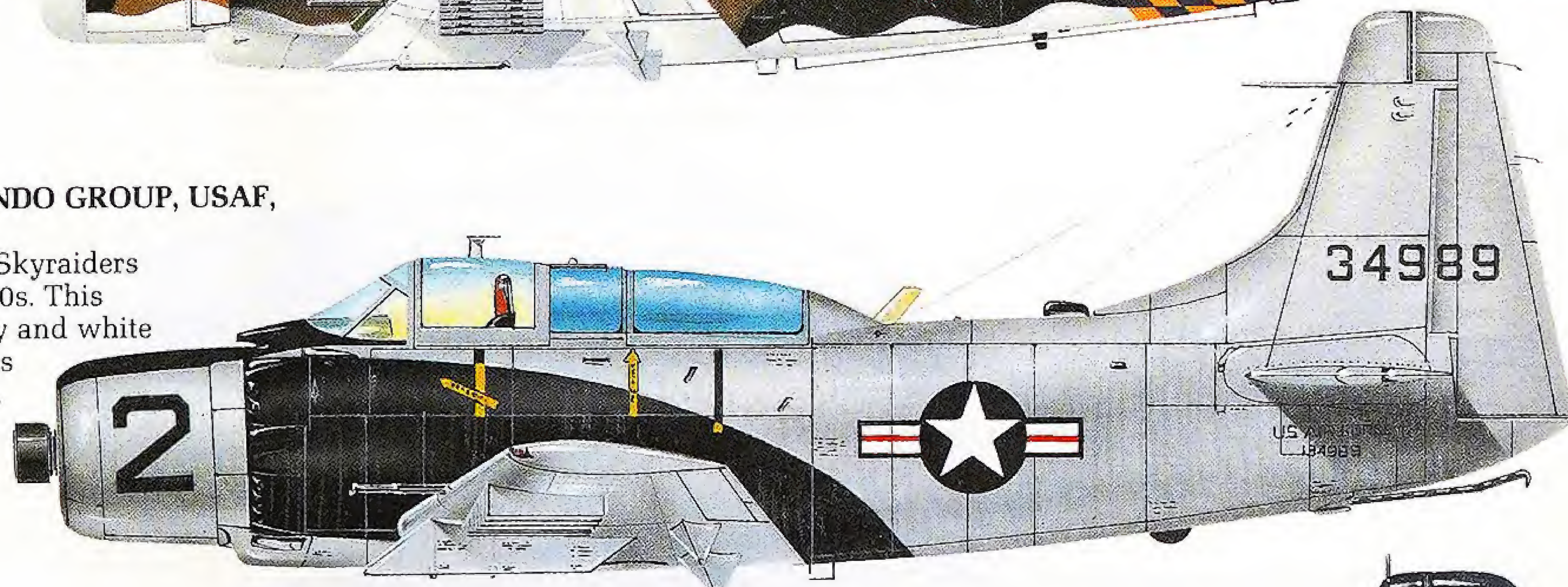
A-1H (AD-6), 518th FIGHTER SQUADRON, VNAF, BIEN HOA, VIETNAM, 1967

The first 25 Skyraiders for the Vietnam Air Force were supplied in September 1960. By March 1972, 289 had been received and equipped seven squadrons. VNAF marking style was similar to the US national insignia except for the colors.



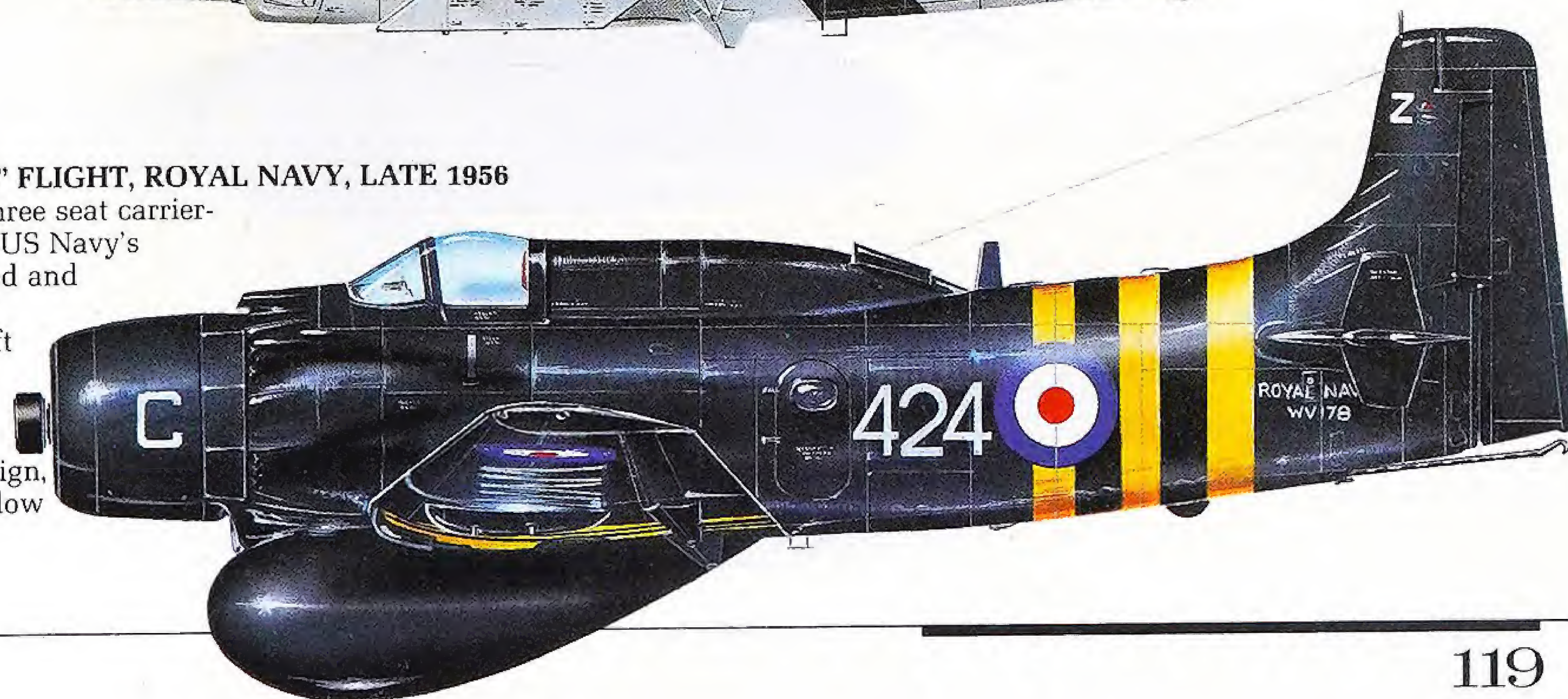
AD-5 (A-1G), FIRST AIR COMMANDO GROUP, USAF, BIEN HOA, VIETNAM, 1964

After years as a Navy aircraft, the Skyraiders joined the Air Force in the mid 1960s. This example still wears the Navy's gray and white colors and operated attack missions against the Viet-Cong in the South. The matt-black area is where the engine exhaust stained the fuselage: the paint was applied to smarten it up.



AEW Mk 1, 849 SQUADRON, "C" FLIGHT, ROYAL NAVY, LATE 1956

Only one RN unit operated this three seat carrier-based radar picket version of the US Navy's AD-4W. A total of 50 was supplied and retained the Midnight Blue finish employed by the USN. Four aircraft were assigned to each carrier, and this example was involved in "Operation Musketeer," the 1956 Suez campaign, aboard HMS Albion. Note the yellow identity stripes.

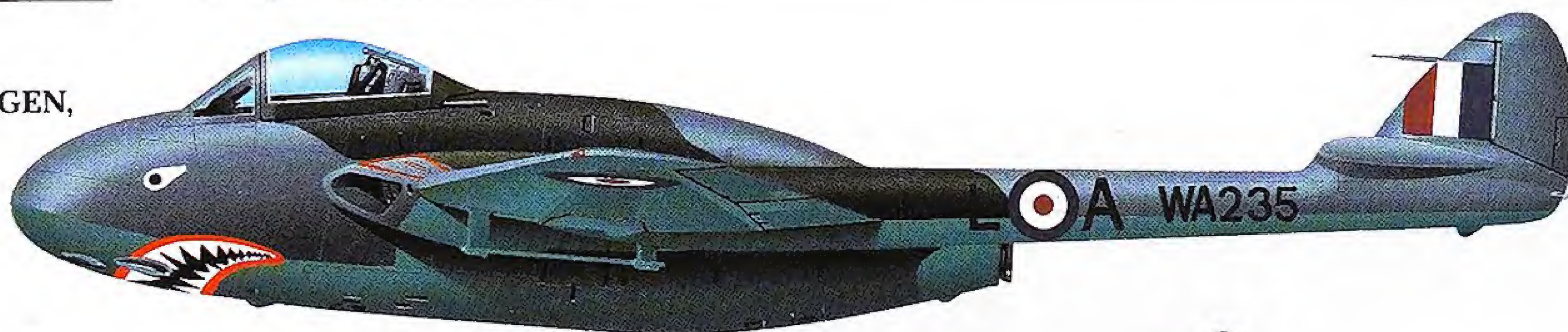


D. H. VAMPIRE

The Vampire single-seat fighter-bomber entered RAF service in 1946, just too late to see action in World War II. With tapering wings and a tail supported on slim booms, the Vampire had an unmistakable shape and at one time the RAF had some 40 squadrons equipped with the type. The original F.1 was succeeded by the F.3, the FB.5 and the tropicalized FB.9. The aircraft was widely exported and total production of all Vampires reached 4206.

FB. Mk 5, 112 SQUADRON, RAF BRUGGEN, WEST GERMANY, 1953

It has Dark Green, Dark Sea Gray and PR Blue undersides. There is an 18in diameter roundel on the boom.

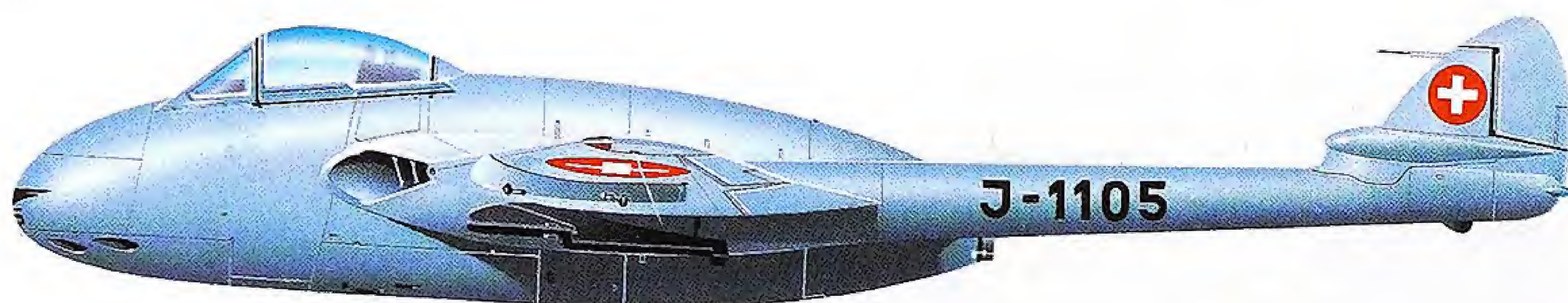


The upper surface camouflage scheme is shown here with 36in diameter wing roundels, 8in high serials on booms and 18in square fin flashes.



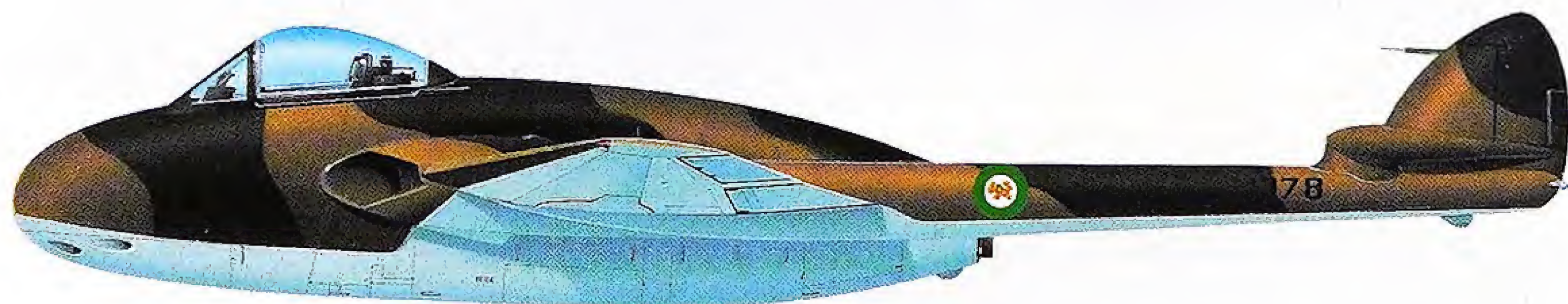
FB. Mk 6, SWISS AIR FORCE, MID-1950s

This was the fifth Swiss Vampire built under license out of 100 produced by F + W, Emmen, from 1951. The finish is silver overall.



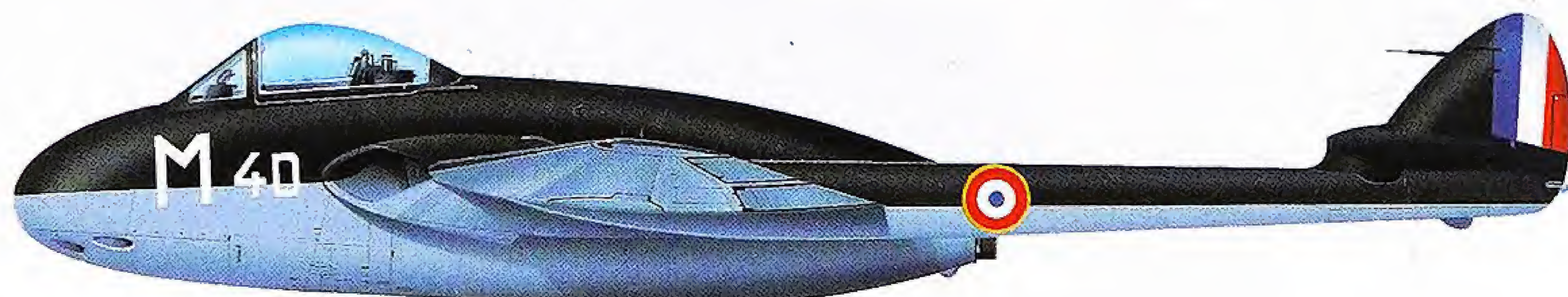
FB. Mk 5, 2 SQUADRON, RHODESIAN AIR FORCE, THORNHILL, RHODESIA, 1971

It has dark green and brown upper surface camouflage with national markings adopted on declaration of UDI in 1970.



FB. Mk 5, FRENCH AIR FORCE, 1950

Known as the Mistral to the French Air Force, 247 were built under license in France.

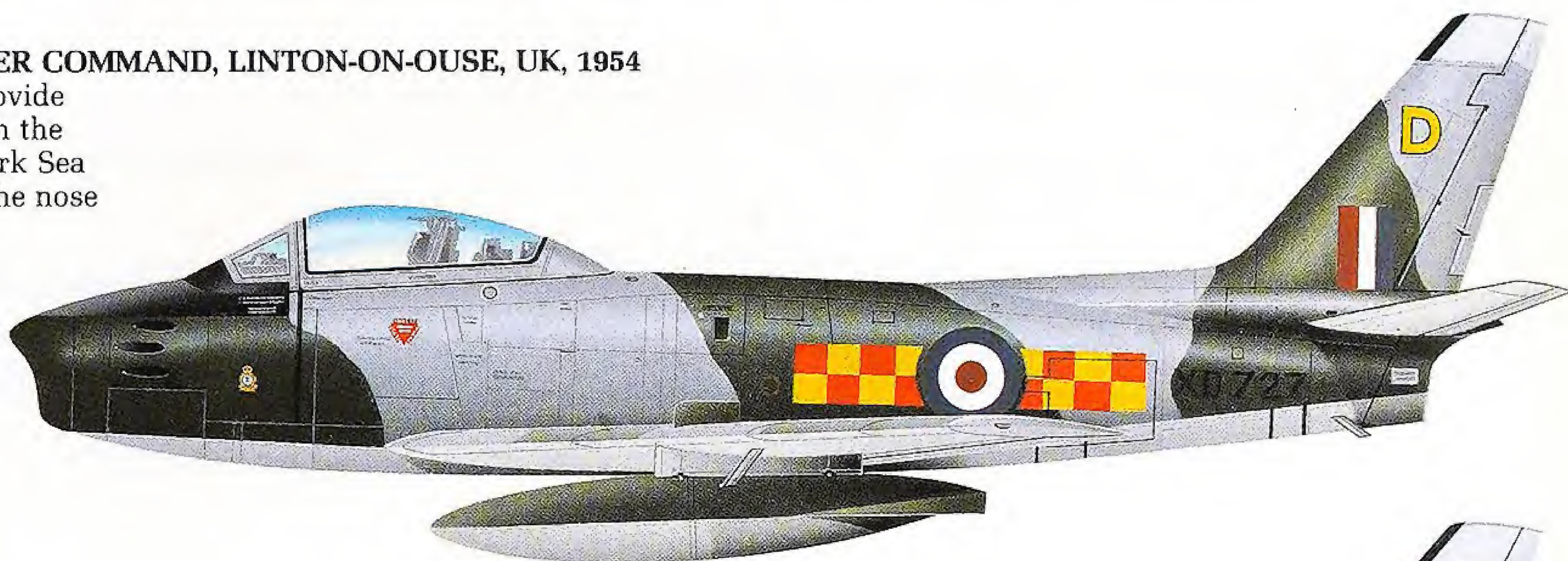


NORTH AMERICAN F-86 SABRE

Victor in the skies over Korea, the Sabre was the successful outcome of American engineering genius combined with the fruits of German wartime research on swept wings. The prototype XP-86 flew in October 1947 and the USAF deployed the F-86A to Korea three years later where its qualities outfought the Chinese-flown MiG-15 jets. Through the Fifties, the Sabre was updated and re-engined until US, Canadian, Australian and Japanese production resulted in 9502 being completed.

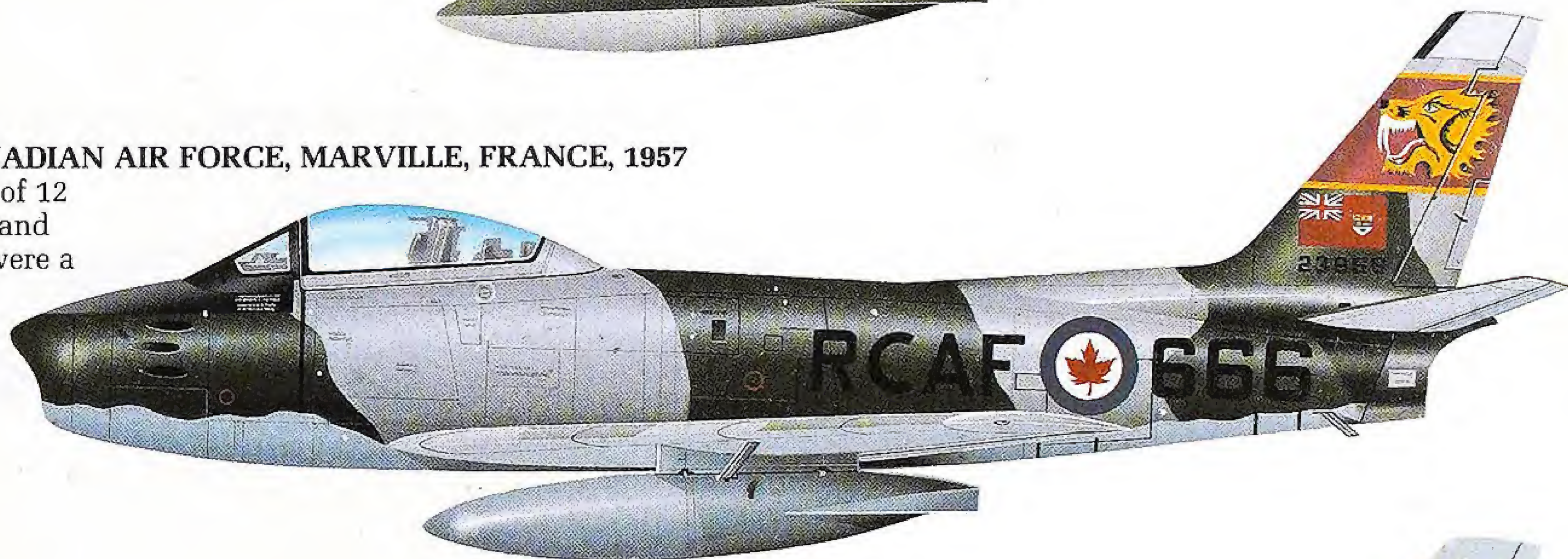
F Mk 4, 92 SQUADRON, RAF FIGHTER COMMAND, LINTON-ON-OUSE, UK, 1954

US Mutual Aid funds were used to provide 430 Canadair-built Sabres to the RAF in the mid-1950s. Finish was Dark Green, Dark Sea Gray and Light Gray undersides. On the nose is a small squadron badge.



Mk 6, 439 SQUADRON, ROYAL CANADIAN AIR FORCE, MARVILLE, FRANCE, 1957

Canada's No 1 Air Division consisted of 12 squadrons of Sabres based in France and West Germany. Bright tail markings were a hallmark of these units.



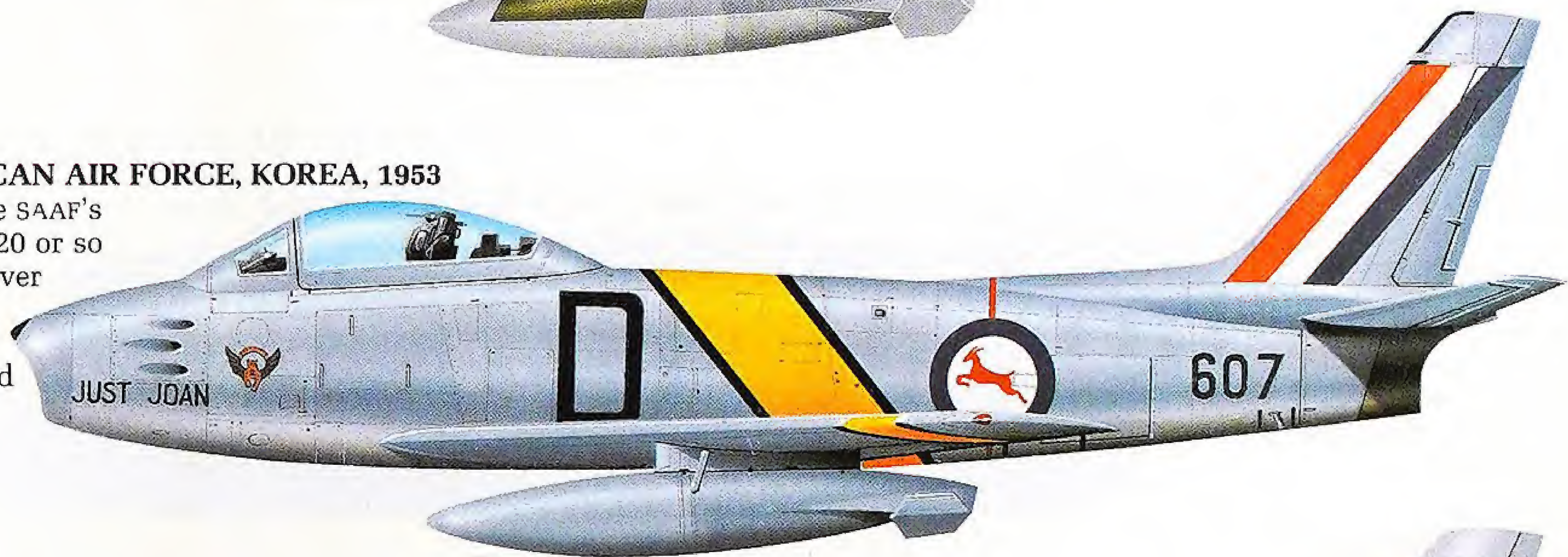
Mk 6, JG 71 "RICHTHOFEN", WEST GERMAN AIR FORCE, WITTMUNDHAFEN, 1963

Three Luftwaffe day fighter Wings operated 225 of the Canadair-built Sabre's. The bright unit markings on JG 71 aircraft are a variation of a scheme carried on the unit's Messerschmitt 109s during WWII. The Richthofen association goes back to World War I.



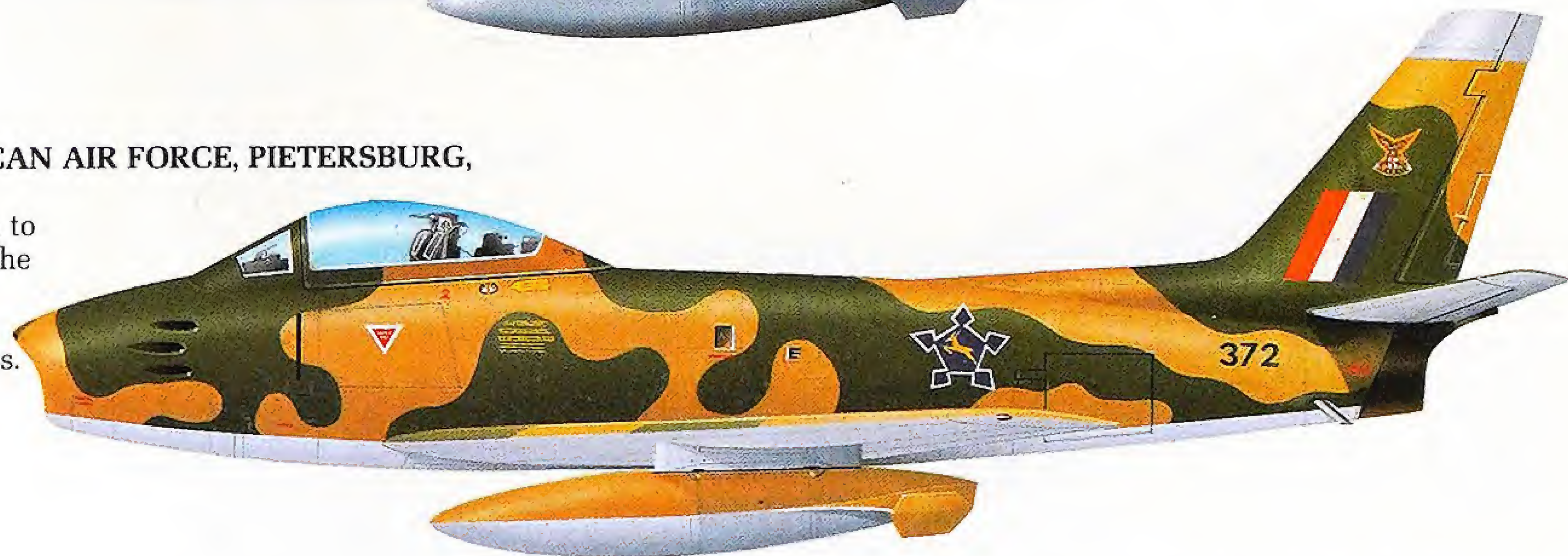
F-86F, 2 SQUADRON, SOUTH AFRICAN AIR FORCE, KOREA, 1953

Between March and October 1952, the SAAF's "Flying Cheetah" squadron operated 20 or so Sabres in this natural metal scheme over Korea. The broad yellow band was an identification marking and the over-large fin stripes were also applied to assist with visual recognition.



Mk 6, 1 SQUADRON, SOUTH AFRICAN AIR FORCE, PIETERSBURG, SOUTH AFRICA, 1973

This unit was the last SAAF squadron to operate the type in a front-line role. The extremely effective camouflage comprised Olive Drab, Deep Buff with Light Admiralty Gray undersides.

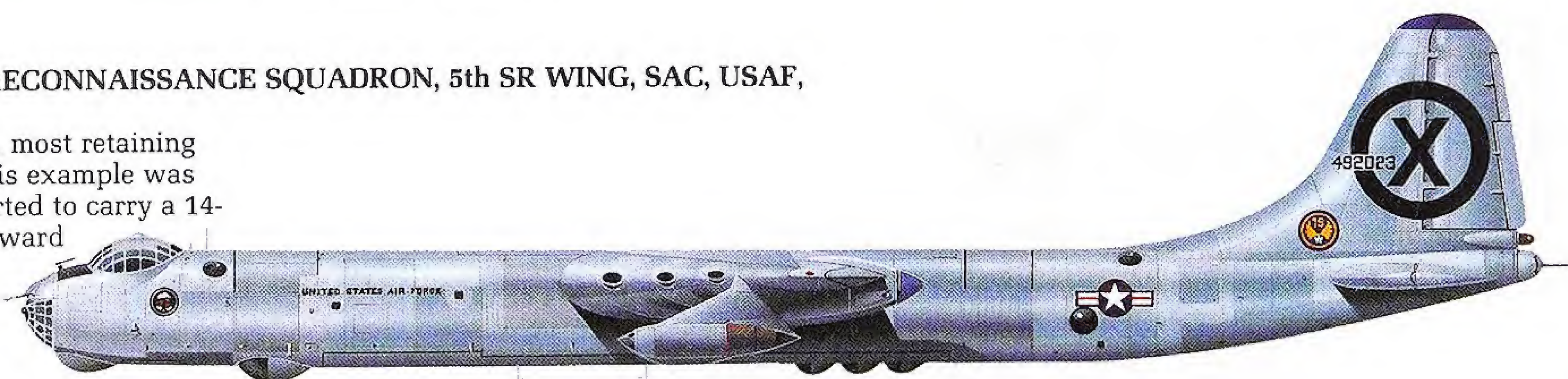


CONVAIR B-36

"Six turning – four burning" was the quip most often associated with this largest of all front-line bombers, the 10-engined B-36. Intended to attack German targets from the USA, low priority and the end of the war slowed development so that the XB-36 first flew on 8 August 1946, with entry into service of the B-36A with Strategic Air Command a year later. Severe technical problems dogged the aircraft throughout its career and the last of 385 was delivered in August 1954. It was withdrawn from service in 1959.

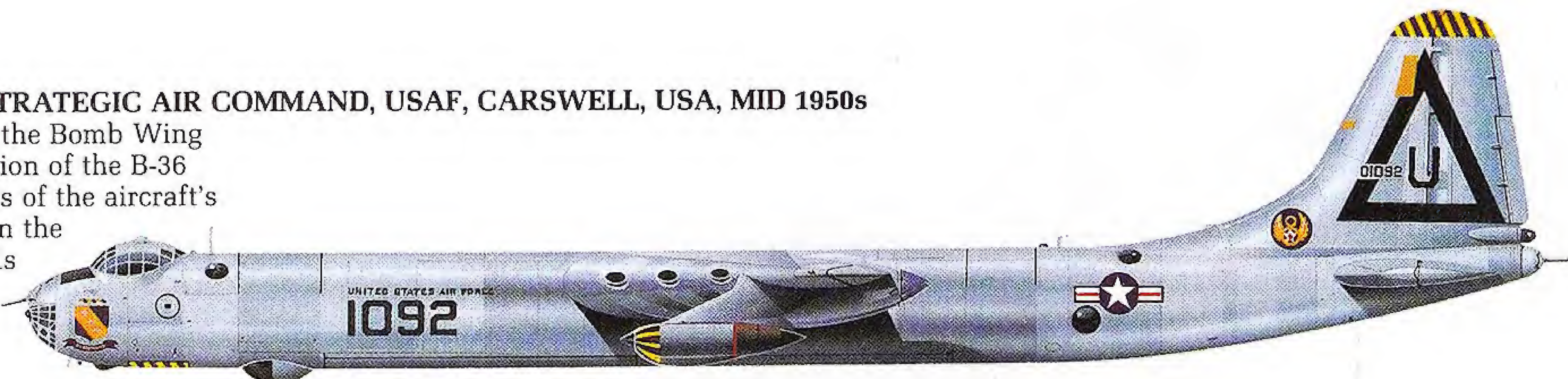
RB-36E, 72nd STRATEGIC RECONNAISSANCE SQUADRON, 5th SR WING, SAC, USAF, TRAVIS AFB, USA, 1951–8

Very few B-36s were painted, most retaining their natural metal finish. This example was built as a bomber, but converted to carry a 14-camera installation in the forward bomb-bay. It bears the X-in-a-circle marking of the 15th Air Force.



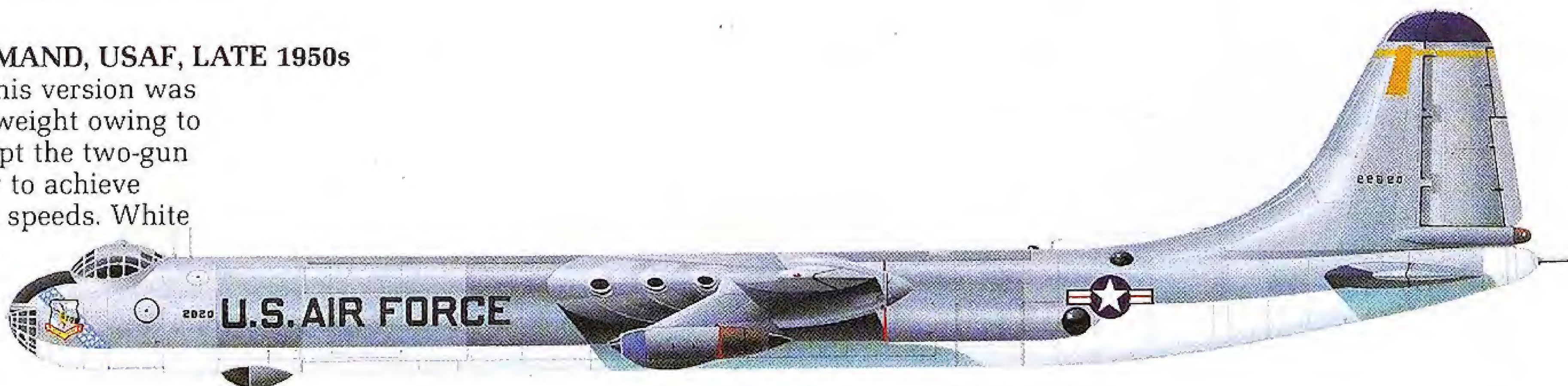
B-36H, 11th BOMB WING, STRATEGIC AIR COMMAND, USAF, CARSWELL, USA, MID 1950s

The U-in-a-triangle identifies the Bomb Wing which flew this updated version of the B-36 until 1957. The last four digits of the aircraft's serial (50-1092) is repeated on the forward fuselage. On the fin is the famous "Winged 8" of the 8th Air Force.



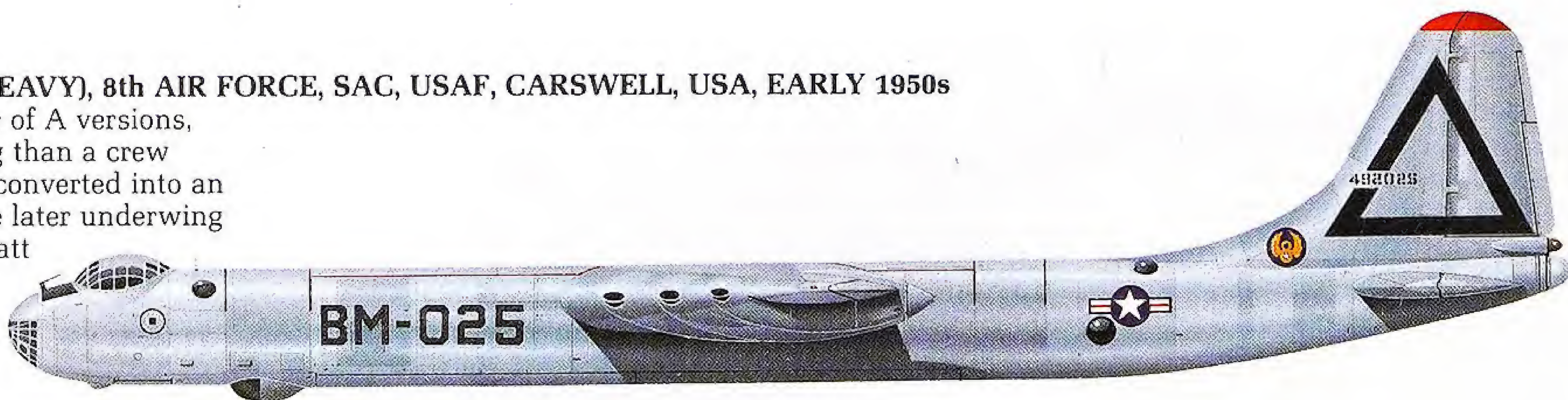
B-36J, STRATEGIC AIR COMMAND, USAF, LATE 1950s

One of the last aircraft built, this version was known as a B-36J(III). Featherweight owing to having all guns removed (except the two-gun tail turret) and a reduced crew to achieve higher operating altitudes and speeds. White undersides and the SAC nose band with badge had become standard by this time.



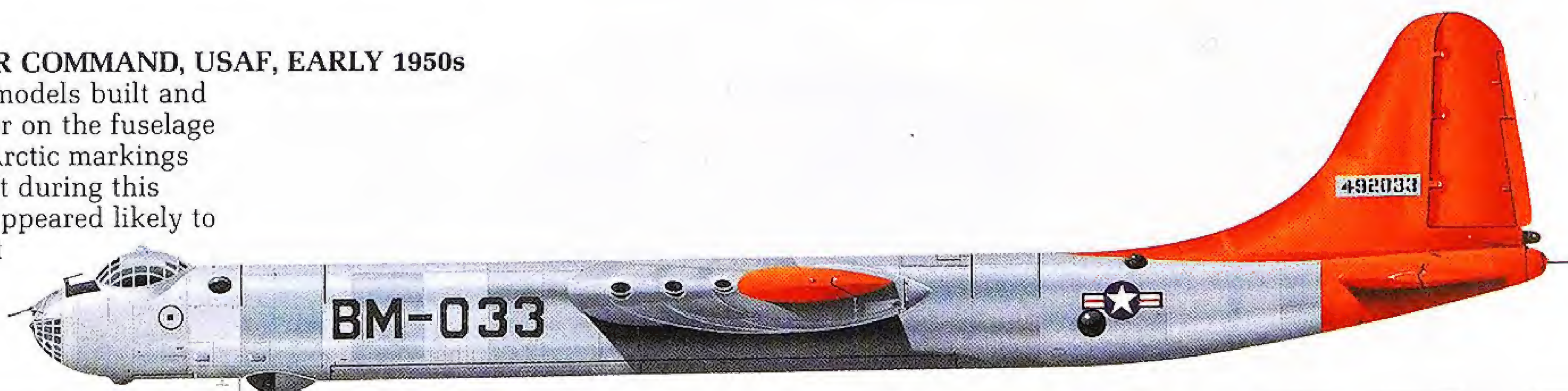
B-36A, 7th BOMB GROUP (HEAVY), 8th AIR FORCE, SAC, USAF, CARSWELL, USA, EARLY 1950s

This aircraft, one of a number of A versions, was nothing more threatening than a crew trainer, although it was later converted into an RB-36E. The aircraft lacks the later underwing jet pods, relying on the six Pratt & Whitney Wasp Majors to drive the 19ft diameter propellers.



B-36B-1-CF, STRATEGIC AIR COMMAND, USAF, EARLY 1950s

This was the eighth of 73 B models built and carries a large "Buzz" number on the fuselage for identification purposes. Arctic markings were applied to many aircraft during this period, when the Cold War appeared likely to erupt into a full-scale conflict requiring "over the Pole" operations.

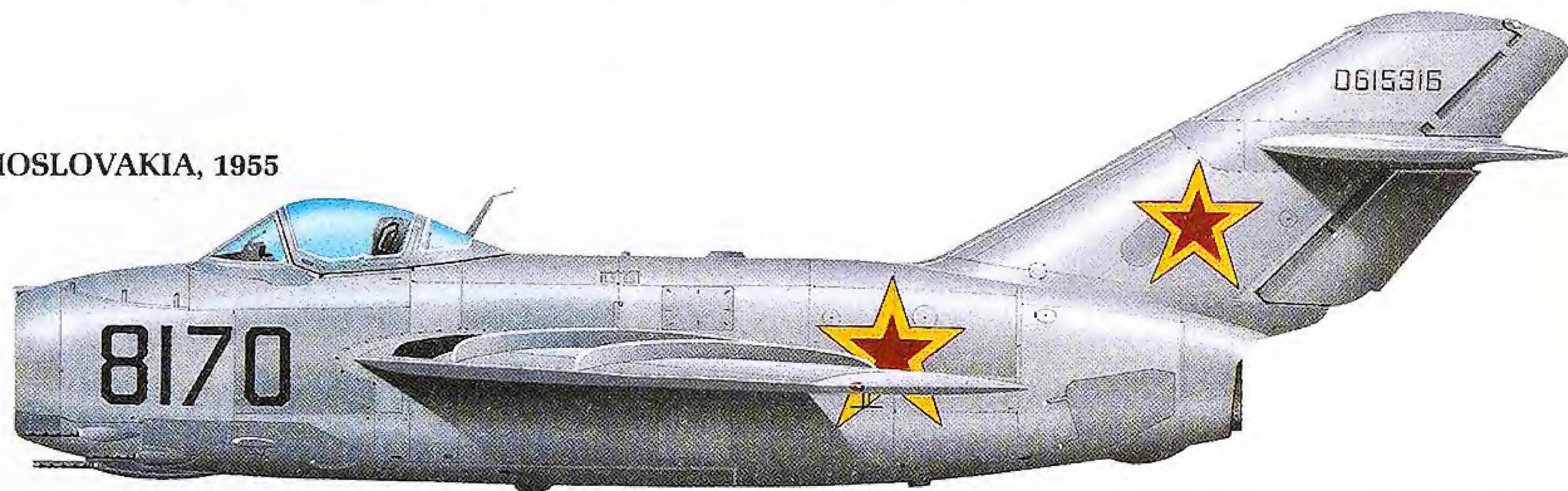


MIKOYAN- GUREVICH MiG-15

Basing their design on captured German material on swept wing research, the Russian MiG Bureau's famous MiG-15 first flew on the power of a British Nene jet engine, a number of which had been exported to the USSR in 1947. Production aircraft actually entered service before the USAF's F-86 Sabre, but both met in the skies over Korea for the first true jet fighter combats. The two aircraft had their good points and the high score achieved by the Americans was probably due to superior pilot training. The name Fagot in the heading is the NATO code name for the MiG-15.

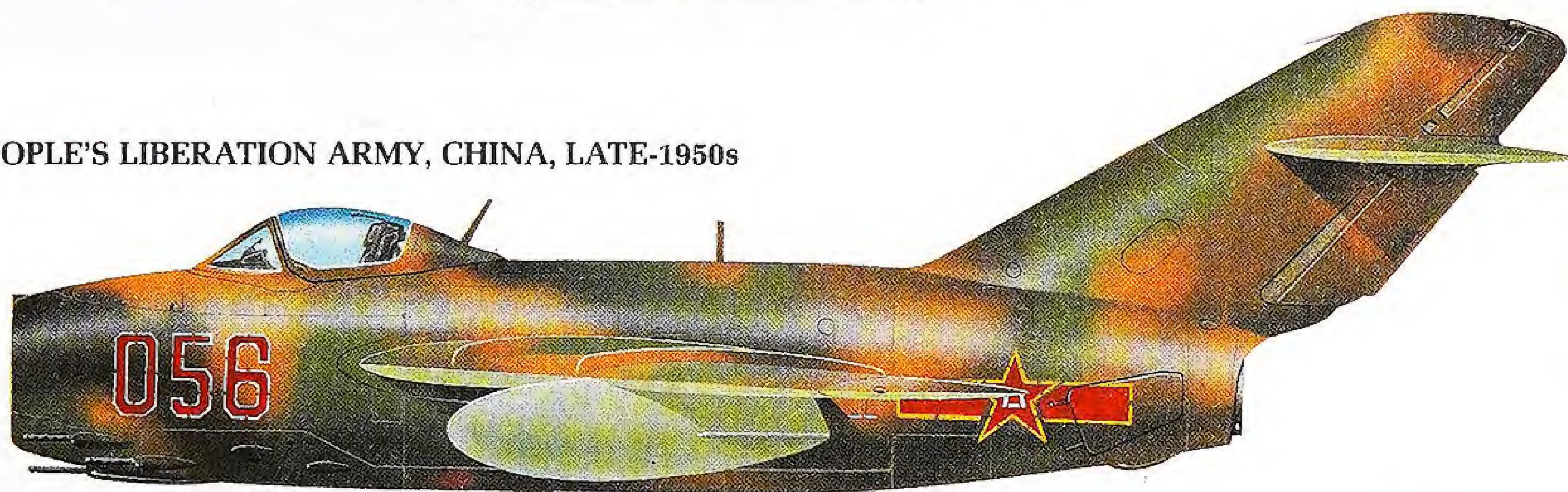
MiG-15bis, SOVIET AIR FORCE, CZECHOSLOVAKIA, 1955

Unpainted airframes were standard for Soviet-operated fighters during the Fifties and Sixties. This aircraft made a navigational error and force-landed in West Germany. On the fin is the construction number and on the nose is the regiment aircraft number.



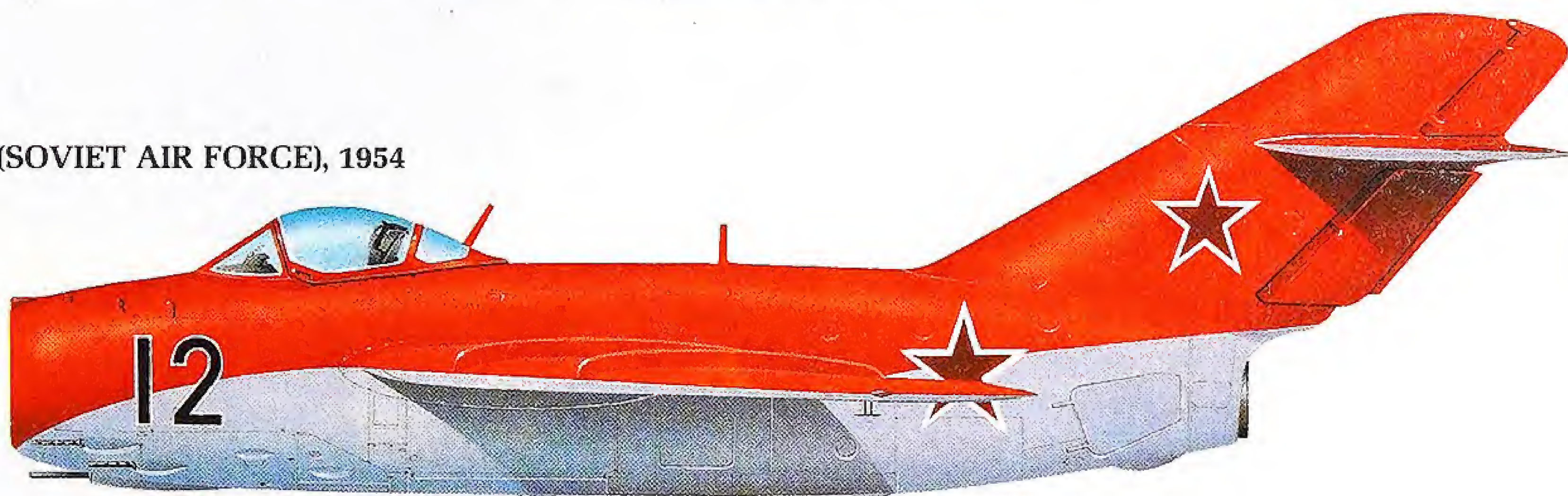
SHENYANG J-2, AIR FORCE OF THE PEOPLE'S LIBERATION ARMY, CHINA, LATE-1950s

Camouflage patterns applied to Chinese-operated fighters usually differed from aircraft to aircraft. The national star and bar marking incorporates the Chinese characters 8 over 1.



MiG-15bis, MOSKOVSKY OKRUG PVO (SOVIET AIR FORCE), 1954

Appropriately named the Red Falcons, the Soviet Air Force aerobatic display team used a number of these brightly-painted aircraft. No national insignia was carried on the upper wing surface.



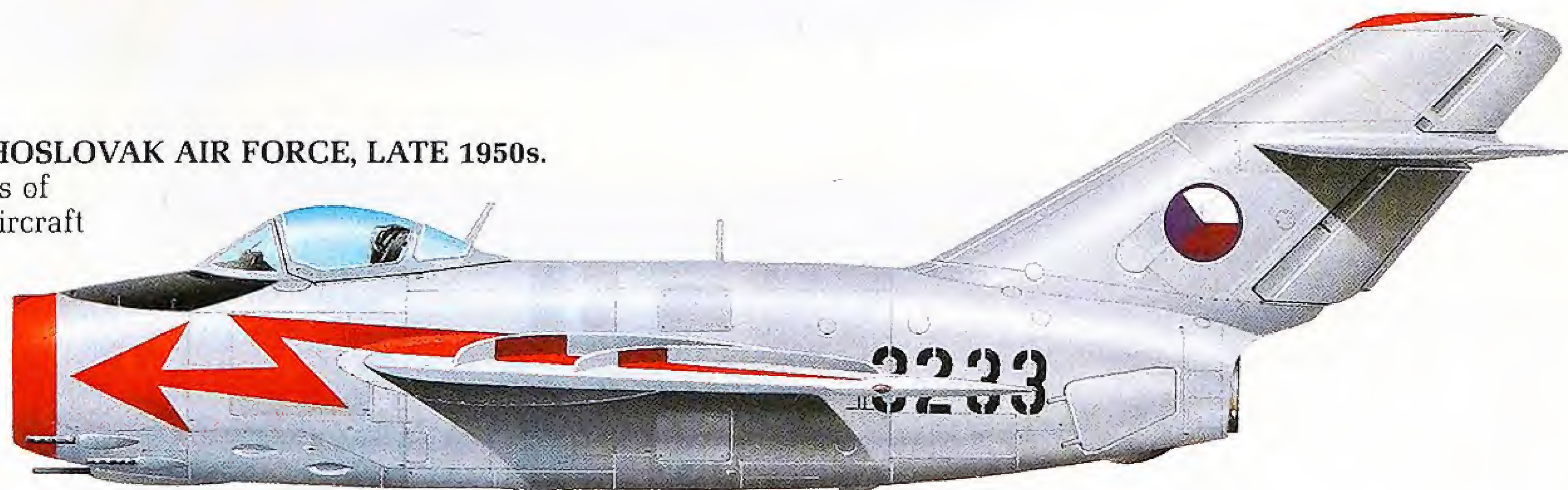
MiG-15bis, PÉCS MILITARY DISTRICT, HUNGARIAN AIR FORCE, 1960

A disruptive green and brown scheme over the upper surfaces contrasted with many eastern Bloc fighters at this time which were often left in natural metal.



MiG-15 bis, AEROBATIC TEAM, CZECHOSLOVAK AIR FORCE, LATE 1950s.

Comparatively plain by today's standards of international aerobatic teams, the early aircraft of the Czechoslovak team only allowed themselves a red lightning flash and arrowhead for decoration. The team used aircraft numbered 3213 to 3233 inclusive.

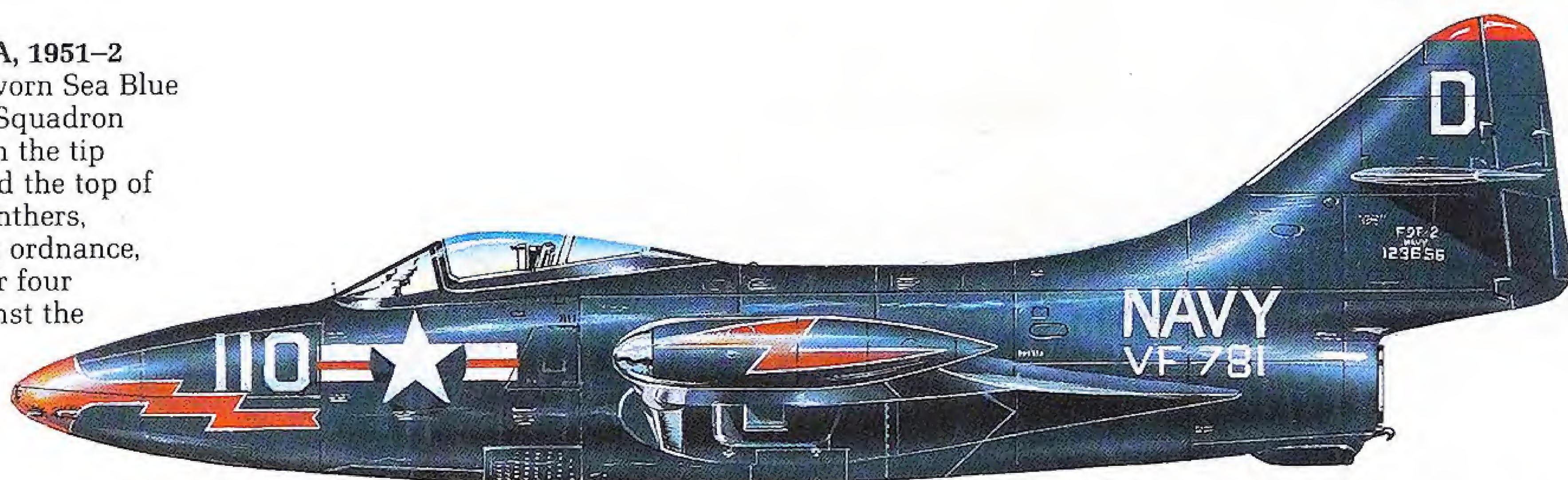


GRUMANN PANTHER/ COUGAR

The F9F Panther was the US Navy's first jet-powered carrier-based fighter-bomber to see action when it attacked targets in Korea on 6 August 1950. The initial straight-winged Panther series gave way to the swept-wing F9F-6 Cougar, with deliveries beginning in December 1951. Both aircraft gave sterling service with the Navy and Marine Corps: 1985 Cougars were built; the total including the Panther was 3367. Some aircraft were later supplied to Argentina; others ended their lives as drones.

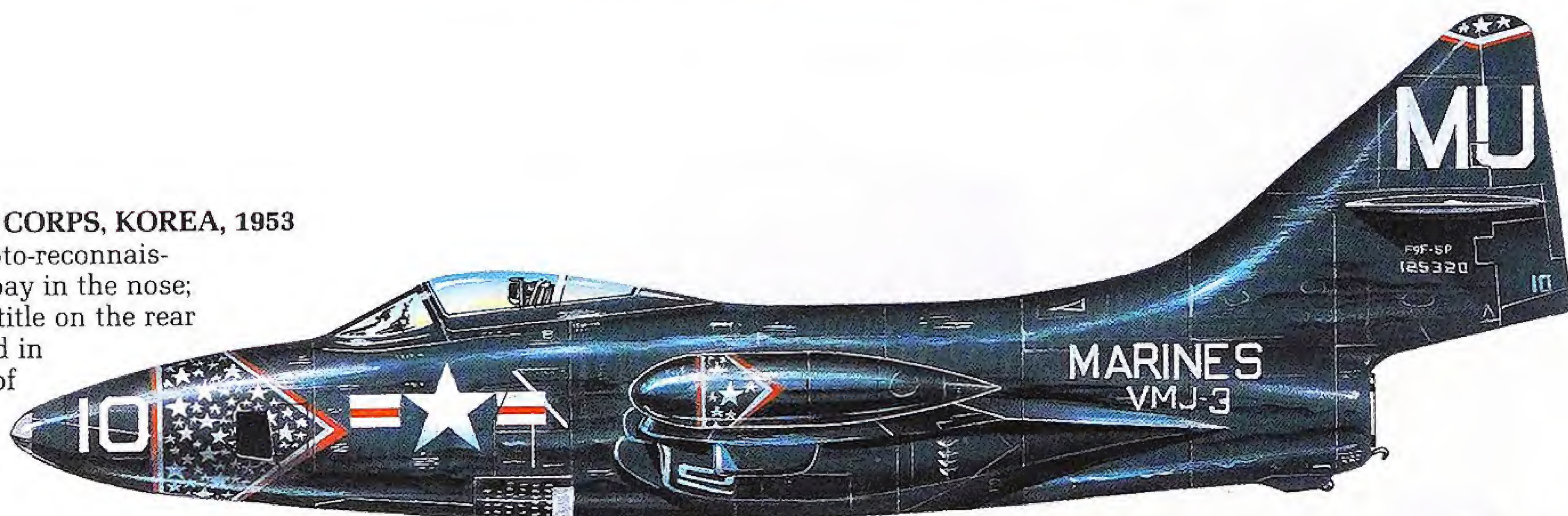
F9F-2, VF-781, US NAVY, KOREA, 1951-2

A Panther in typical glossy, but worn Sea Blue finish of the Korean War period. Squadron markings were usually painted on the tip tanks as well as the nose area and the top of the fin. On many missions the Panthers, having unloaded their underwing ordnance, assumed a fighter role, using their four 20mm cannon to good effect against the poorly flown MiGs and Yaks.



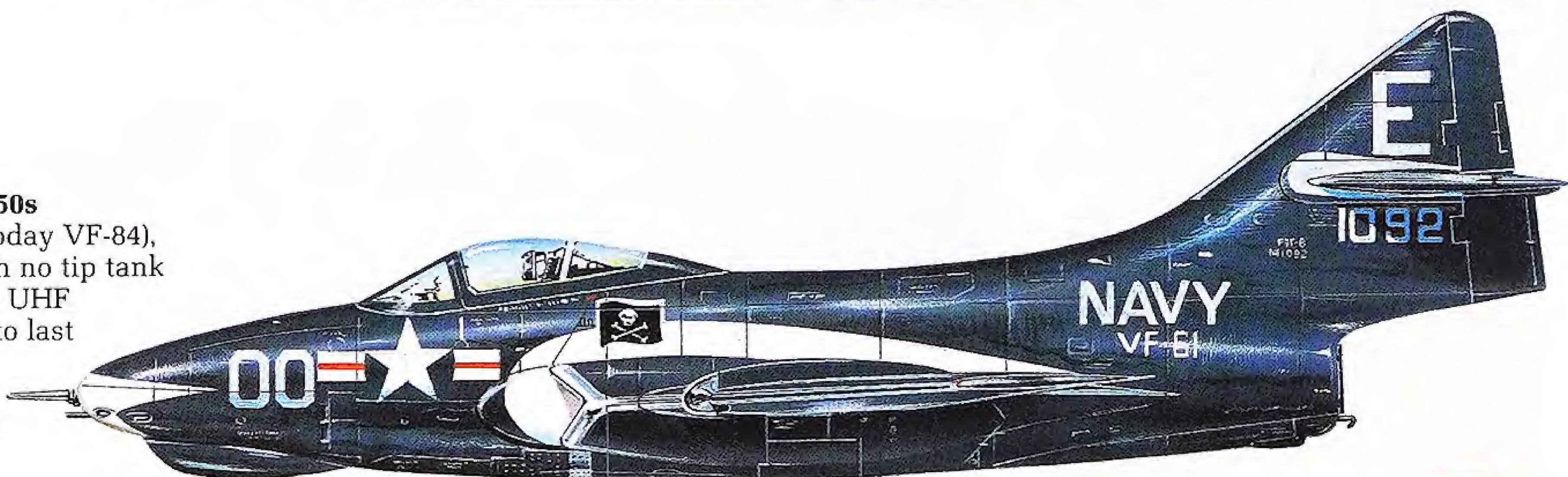
F9F-5P, VMJ-3, US MARINE CORPS, KOREA, 1953

'Midnight Blue' unarmed photo-reconnaissance Panther with camera bay in the nose; 36 were built. The 'Marines' title on the rear fuselage had been introduced in February 1950 after a lapse of nine years; the letters were 12in high.



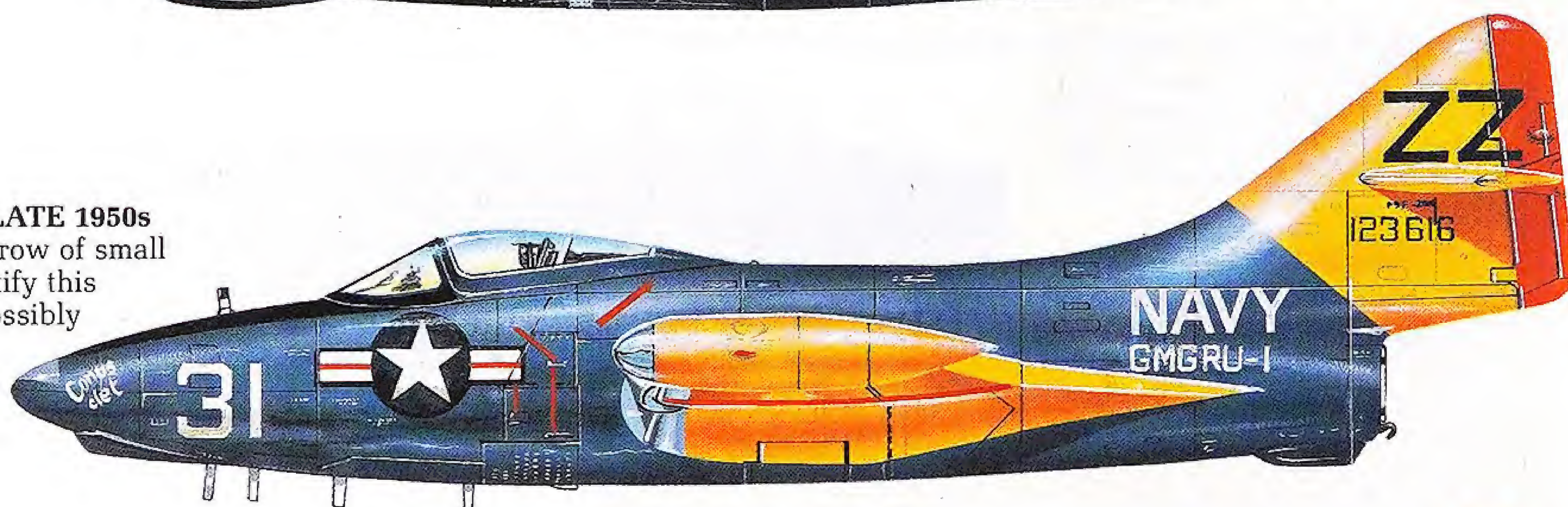
F9F-8, VF-61, US NAVY, MID 1950s

A Cougar of 'The Jolly Rogers' (today VF-84), identified by the swept wing with no tip tank and the undernose blister for the UHF antenna. The dark coloring was to last until July 1955, when the Light Gull Gray and White was adopted, becoming Fleet-wide by mid 1957.



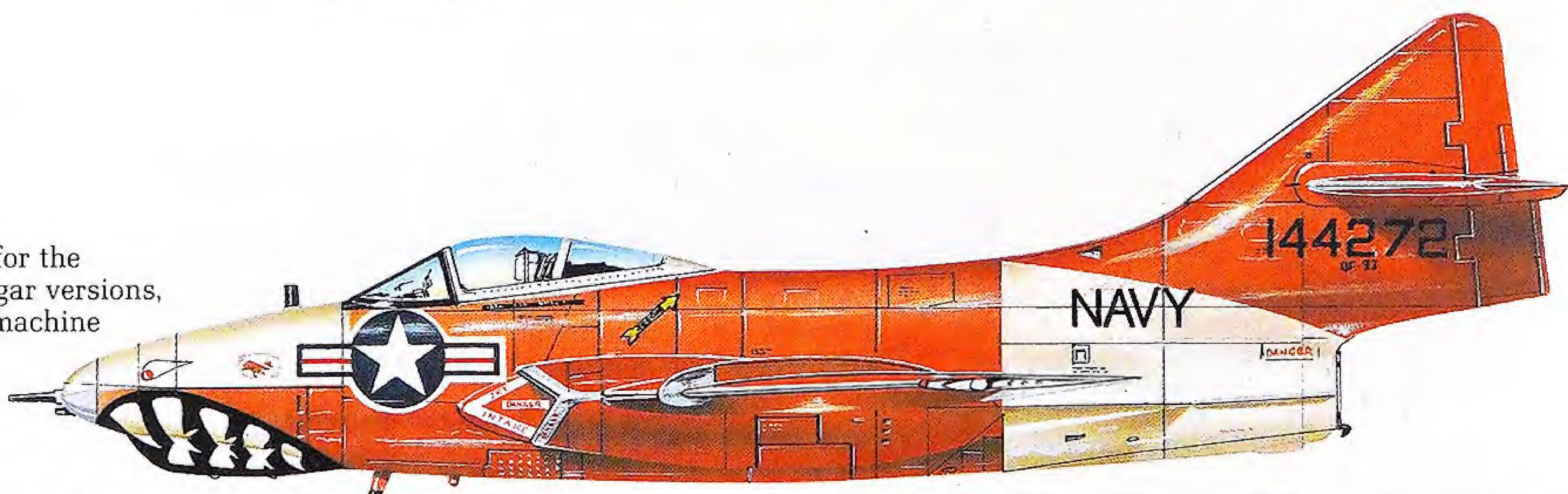
F9F-2KD, GMGRU-1, US NAVY, LATE 1950s

The chrome-yellow paint and the row of small antennas under the fuselage identify this Panther as a drone conversion, possibly operational with the Naval Ordnance Test Station at China Lake.



QF-9J, US NAVY, 1969-70

Several paint schemes were used for the remotely piloted Panther and Cougar versions, including the example here. This machine was an F9F-8 in its early days - probably the best of all the F9F versions.



SIKORSKY S-55

The portly S-55 was one of the major advances in helicopter design. Powered by a radial engine in the nose, driving a three-bladed main rotor and a small anti-torque tail rotor, the S-55 was the first major load-carrying helicopter with a practical cabin area and acceptable performance. The prototype made its first flight in November 1949 as the YH-19 and entered USAF service as the H-19 just over a year later. Both the Army and Navy/Marines ordered the type and production reached 1281.

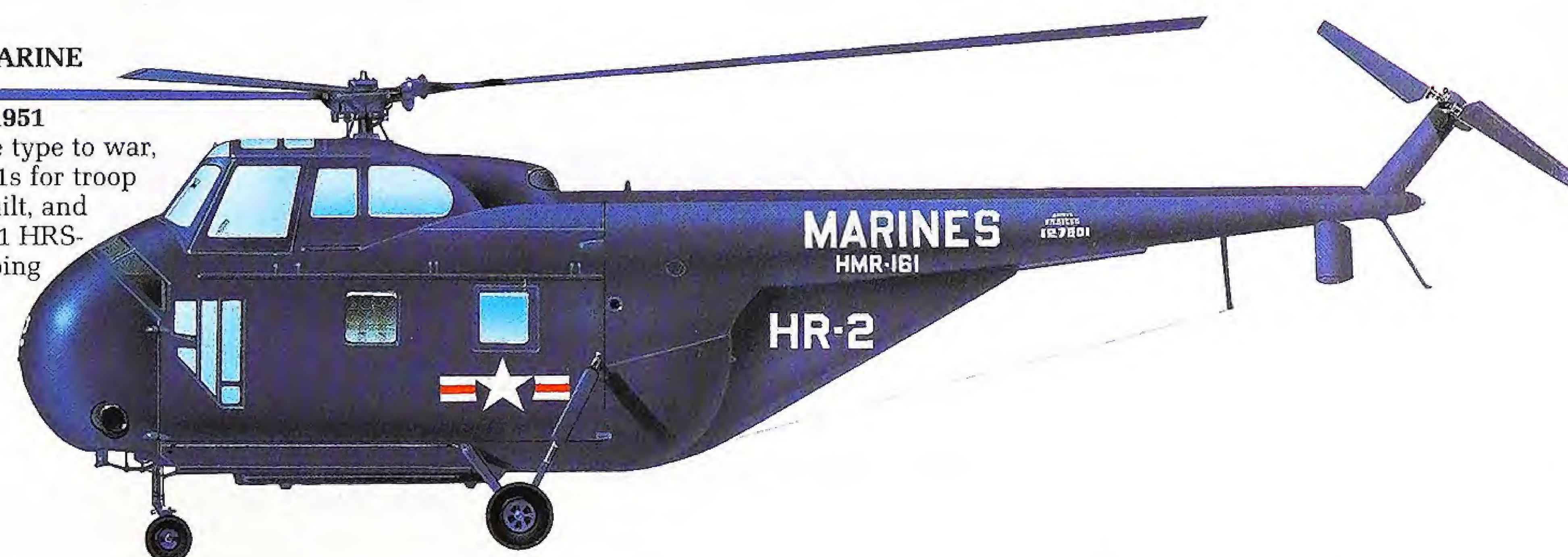
HO4S-3, UNITED STATES NAVY, EARLY 1950s

The Navy first ordered the S-55 as the HO4S-1 in April 1950, first deliveries being made at the end of the year for general purpose and anti-submarine observation. The -3 had a higher-powered 700hp Wright R-1300 engine. The type was redesignated UH-19F in 1962.



HRS-1, HMR-161, US MARINE CORPS, KOREA, SEPTEMBER 1951

The first unit to take the type to war, HMR-161 used its HRS-1s for troop transport. Sixty were built, and they were followed by 91 HRS-2s, both versions equipping nine Marine transport squadrons. Overall Sea Blue was standard coloring at this time.



H-19C, US ARMY, MID 1950s

Starting in 1952, the US Army received 2 C and 336 D versions for utility and assault duties. The Red Indian name 'Chickasaw' was given to the type, and the designation changed in 1962 to UH-19C and D series. Olive Drab was the overall color.



H-19, ROYAL CANADIAN AIR FORCE, MID 1950s

Like many countries, Canada ordered the military version of the S-55. Operated by the RCAF on utility and base-rescue duties, the type was given this distinctive color scheme.

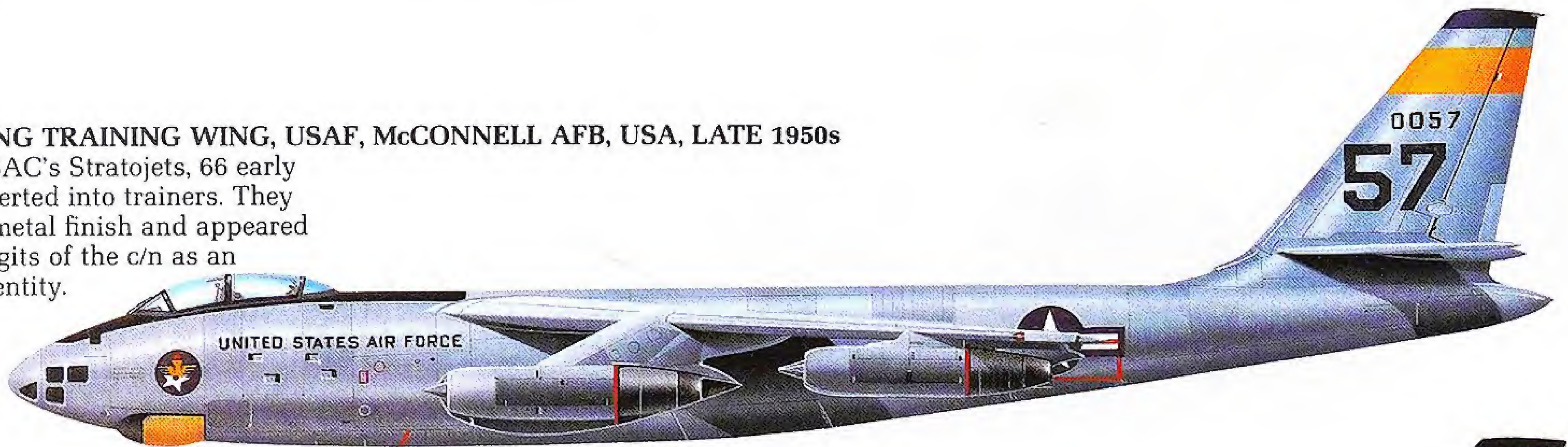


BOEING B-47

As was the case with the F-86 Sabre jet fighter, wartime German research into the use of swept wings to improve performance inspired Boeing to incorporate this type of wing into its first multi-engined turbojet bomber, the B-47. Although the prototype XB-47 first flew in December 1947, the advanced nature of the design slowed the program: it was 1952 before the first B-47Bs began re-equipping SAC medium-bomber units in any numbers. Over 1800 eventually equipped 81 squadrons before its withdrawal in the mid 1960s.

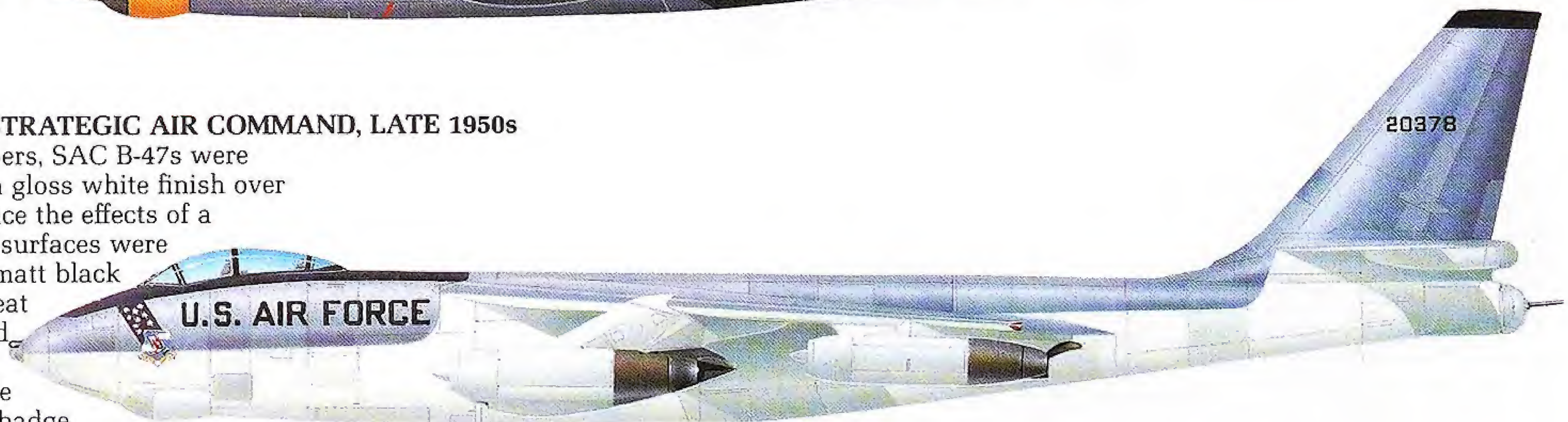
TB-47B, 3520th FLYING TRAINING WING, USAF, McCONNELL AFB, USA, LATE 1950s

To train aircrew for SAC's Stratojets, 66 early B versions were converted into trainers. They retained the natural metal finish and appeared to use the last two digits of the c/n as an individual aircraft identity.



B-47E-46-BW, USAF STRATEGIC AIR COMMAND, LATE 1950s

Like the RAF's V-bombers, SAC B-47s were given an anti-radiation gloss white finish over the undersides to reduce the effects of a nuclear flash. The top surfaces were left aluminum with a matt black surround to the two-seat cockpit. The Command sash and badge was applied to the port side of the nose, the Wing badge to the starboard side.



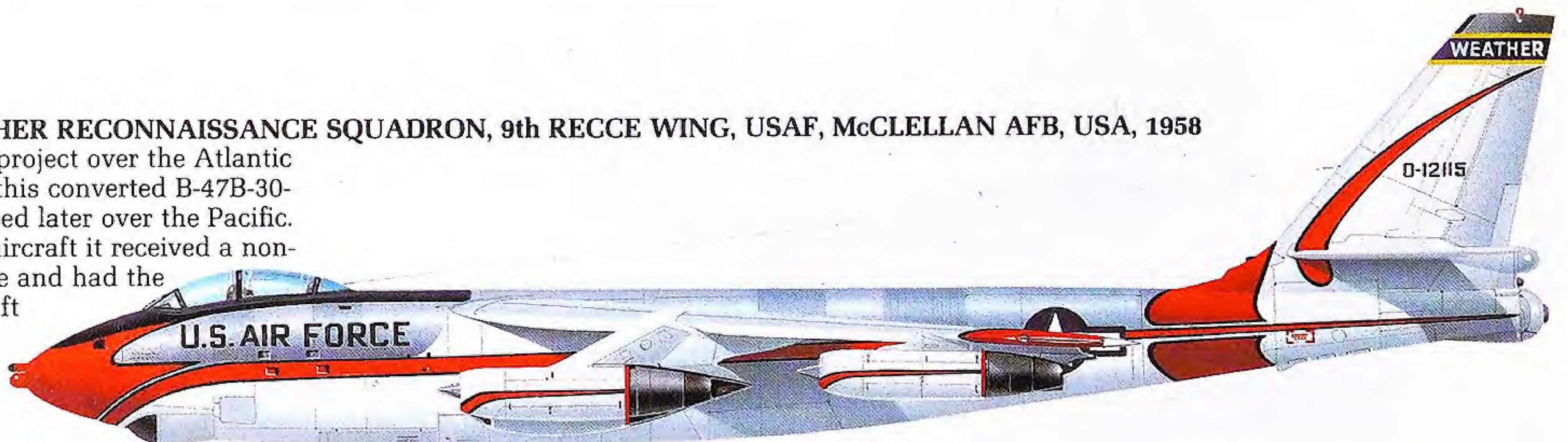
B-47E-130-BW, 307th BOMB WING, USAF, LINCOLN AFB, USA, LATE 1950s

This late-production aircraft, one of 1359 Es built at Wichita, has large 1780 US gal drop-tanks between the engines. Each aircraft could carry up to 20000lb of bombs internally; defensive armament was limited to two 20mm cannon in the tail turret.



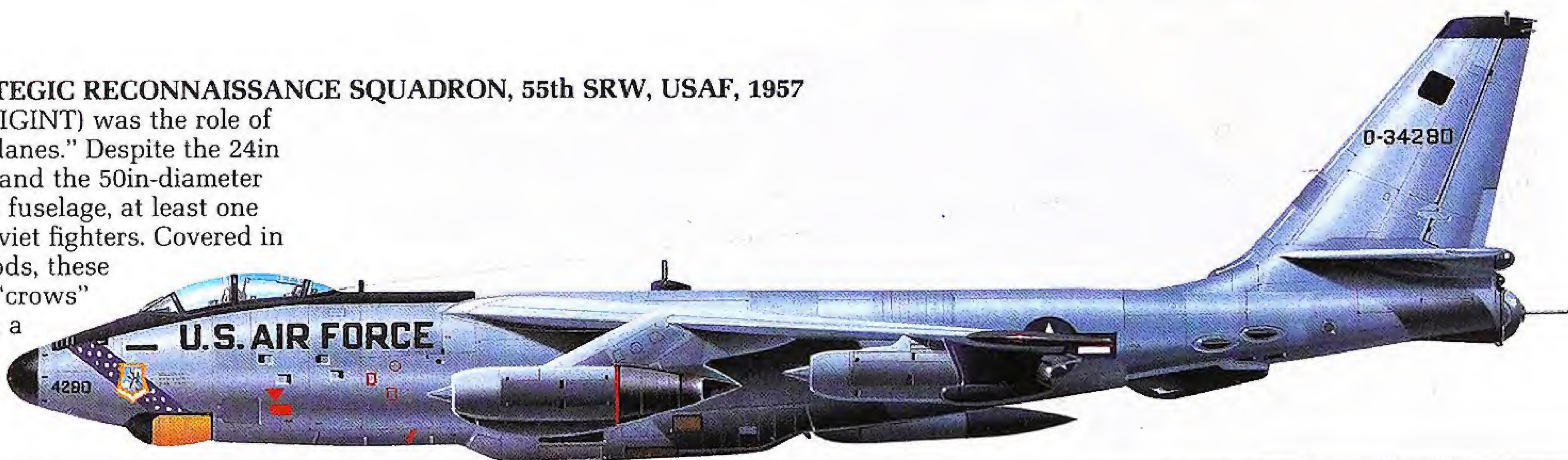
WB-47B, 55th WEATHER RECONNAISSANCE SQUADRON, 9th RECCE WING, USAF, McCLELLAN AFB, USA, 1958

A hurricane research project over the Atlantic was the first task for this converted B-47B-30-BW in 1956. It was used later over the Pacific. As a special mission aircraft it received a non-standard paint scheme and had the main role of the aircraft painted at the top of the fin.



RB-47H, 343rd STRATEGIC RECONNAISSANCE SQUADRON, 55th SRW, USAF, 1957

Signals intelligence (SIGINT) was the role of these so-called "spy-planes." Despite the 24in high title on the nose and the 50in-diameter star on the side of the fuselage, at least one was shot down by Soviet fighters. Covered in aerials and strange pods, these aircraft carried three "crows" (systems operators) in a bomb-bay compartment.

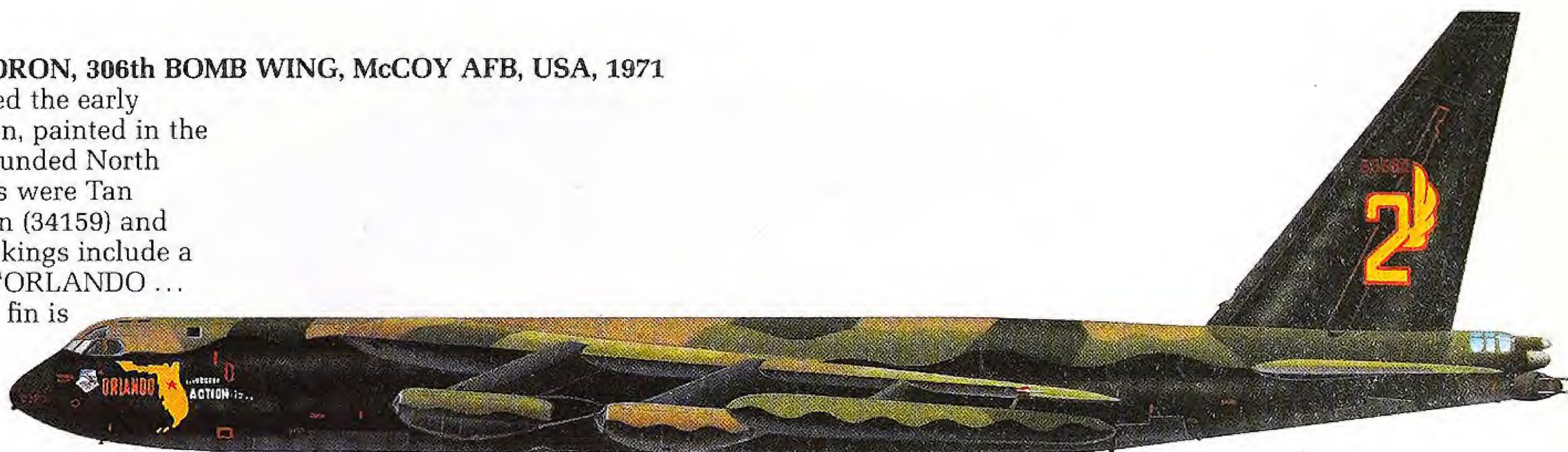


BOEING B-52

When the eight-engined B-52 entered service with Strategic Air Command in 1955, few can have predicted that it would still be operational in 1990. Some 261 remain in the USAF inventory, their main roles being as air-launched cruise missile carriers and anti-surface warfare aircraft armed with sea-skimming Harpoon missiles. Each with a crew of six, these remaining aircraft of 744 built between 1954 and 1962 will continue flying for some time to come.

B-52D, 367th BOMB SQUADRON, 306th BOMB WING, McCOY AFB, USA, 1971

The tall pointed tail identified the early variants. It was the D version, painted in the scheme shown here, that pounded North Vietnam. The SE Asia colors were Tan (34201), Green (34079), Green (34159) and Black (17038). The nose markings include a SAC badge and the legend "ORLANDO ... where the action is". On the fin is the symbol of the 2nd Air Force.



B-52G, STRATEGIC AIR COMMAND, US AIR FORCE, 1980

Devoid of any markings other than the standard serial in black on the fin tip (repeated on the nose) and the national insignia, which is hidden by the wing in this view, on the fuselage side, this G variant has the latest electro-optical viewing system blisters under the nose. White undersides replaced the black of the Vietnam era.



B-52G, STRATEGIC AIR COMMAND, US AIR FORCE, 1986

Another G version, this time sporting the SAC badge on the nose. The emblem was the result of a competition staged in 1951 for an appropriate Command crest. The winning insignia was submitted by SSgt R. T. Barnes of the 92nd Bomb Wing at Fairchild AFB, Washington, and approved by the USAF in January 1952.



B-52G, STRATEGIC AIR COMMAND, US AIR FORCE, 1988

The latest color combination consists of two dark grays and a green which SAC chose in 1985 to conceal B-52s better in their low-level attack role. The result is a particularly sombre finish; but it is non-reflective, which reduces its visibility when viewed from above against the ground.



B-52H, 319th BOMB WING, US AIR FORCE, GRAND FORKS AFB, USA, 1986

The H version differs from the G in having eight TF33 turbofan engines in place of the J57 turbojets, and a single 20mm cannon in the tail instead of four .50 caliber MGs; both types of tail turret are remotely controlled. Ninety-five B-52Hs will be cruise missile carriers, each having 12 missiles externally mounted and eight on a rotary launcher in the bomb-bay.

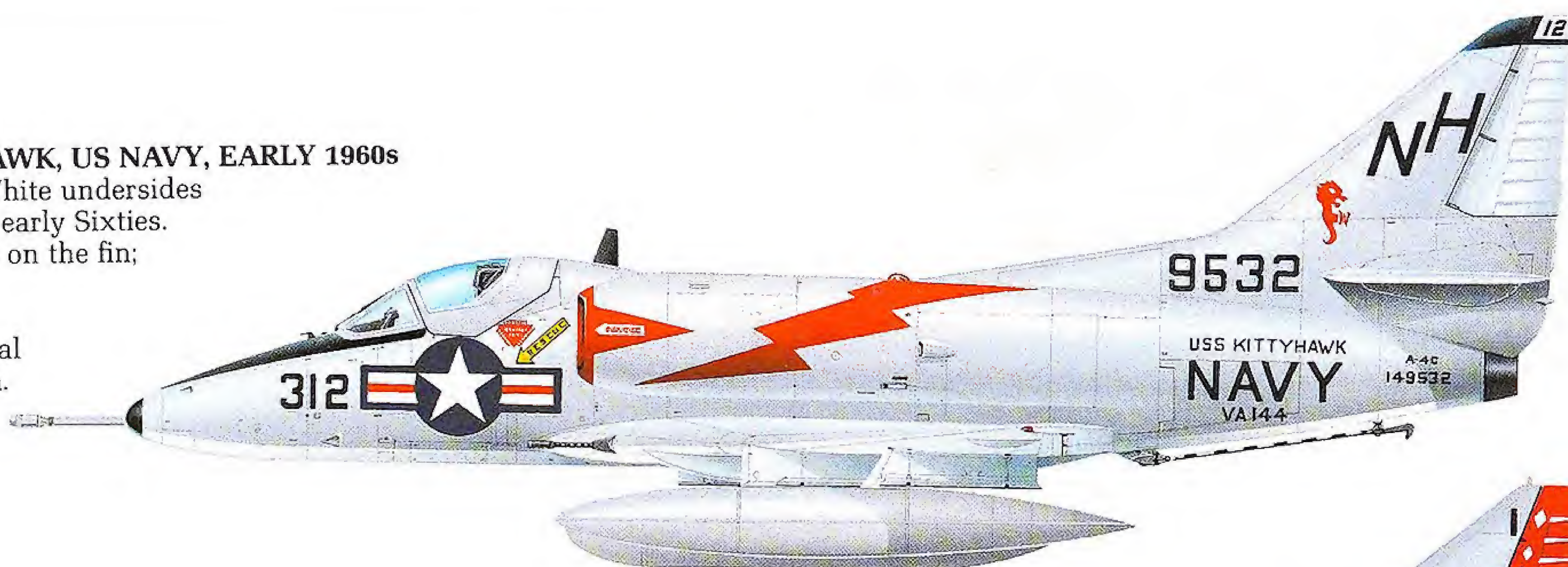


MCDONNELL DOUGLAS A-4

Nicknamed the Bantam Bomber when it first went to sea in 1954, the A-4 was a superb design, lightweight and simple. The wing was small enough not to require folding for carrier stowage, yet contained enough fuel to give a respectable combat range. More than 17 different configurations and a run of 2960 aircraft over 25 years are worthy achievements. Current operators include Argentina, Malaysia, New Zealand and Singapore.

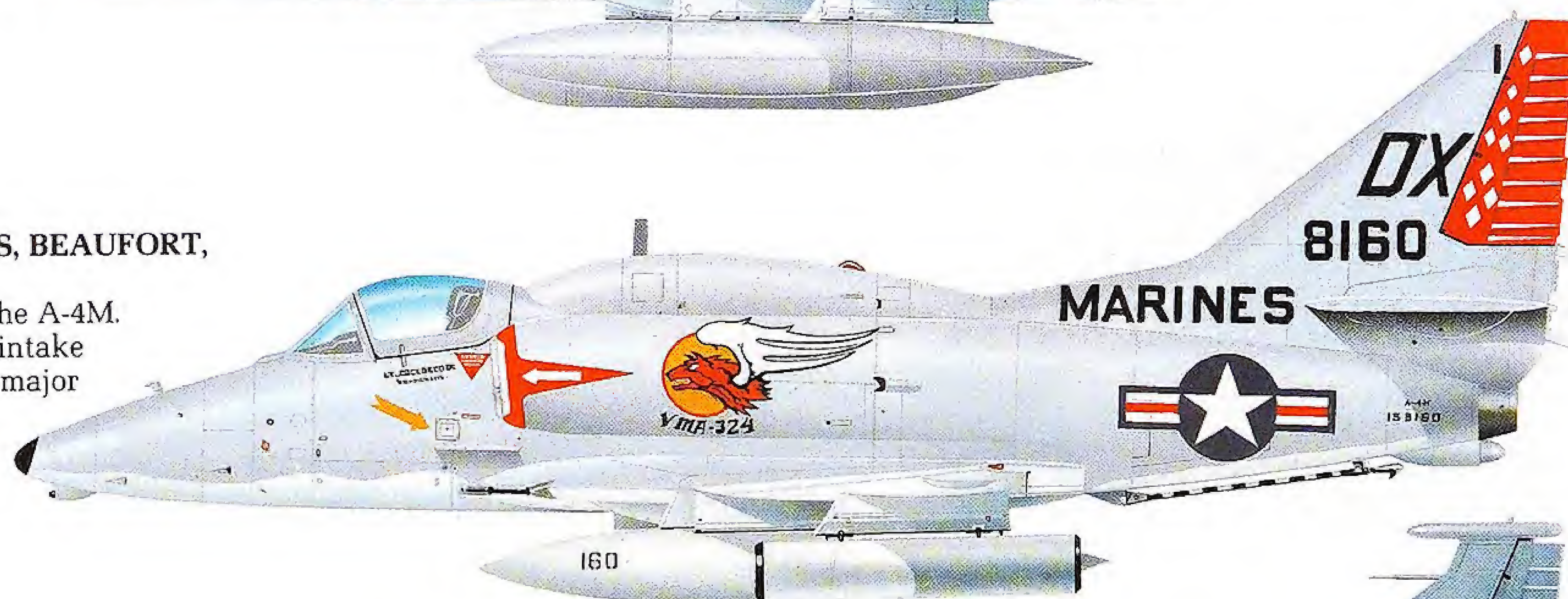
A-4C, VA-144, USS KITTYHAWK, US NAVY, EARLY 1960s

Light Gull Gray and Gloss White undersides and markings that typify the early Sixties. The Carrier Air Wing code is on the fin; the aircraft number is displayed on the nose and the last four digits of the serial are enlarged on the dorsal fin.



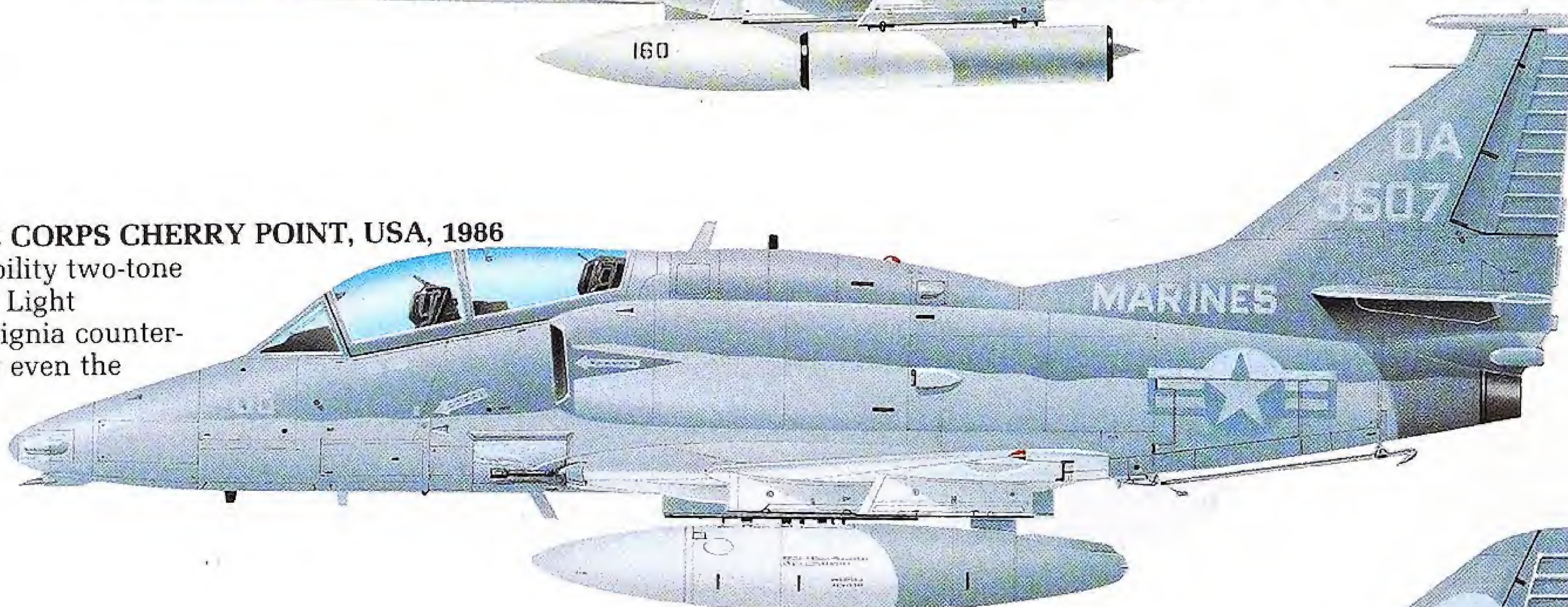
A-4M, VMA-324, US MARINE CORPS, BEAUFORT, S CAROLINA, 1972

This was the first Marine unit to fly the A-4M. VMA-324 displayed its badge on the intake sides. Improved pilot visibility was a major feature of this version which had a redesigned canopy and more ammunition for the wing-root 20mm guns.



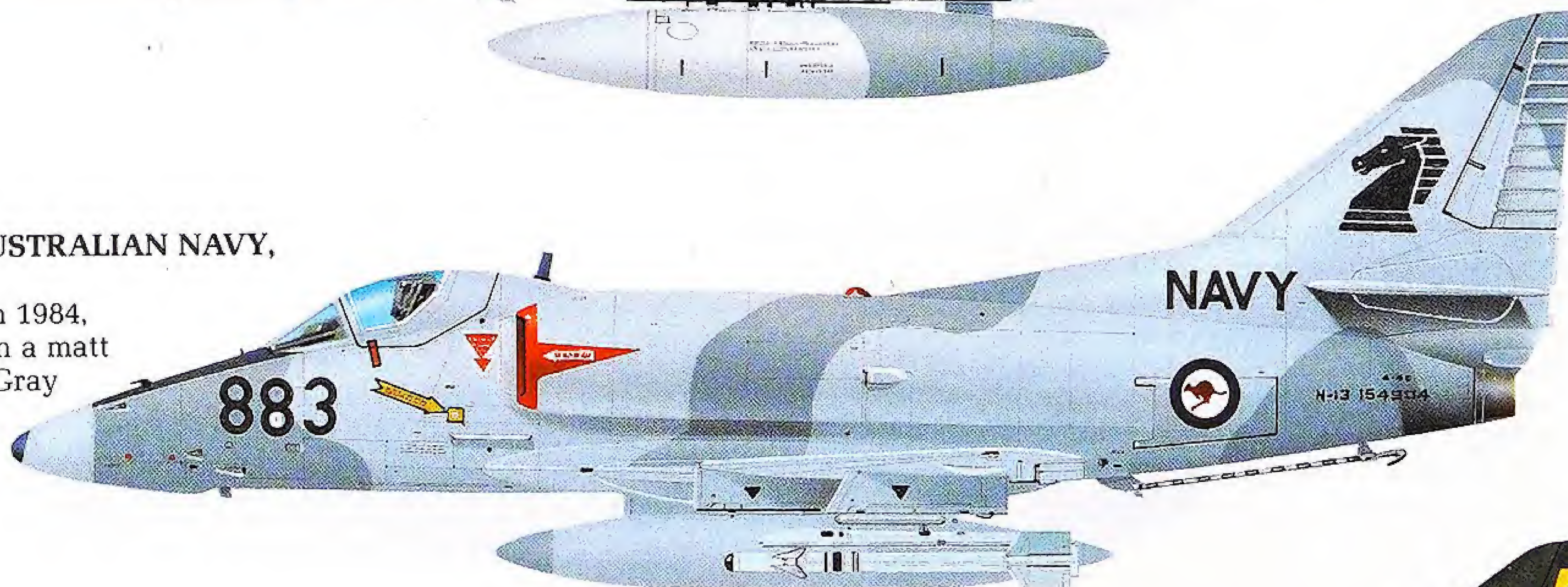
OA-4M, H&MS-32, US MARINE CORPS CHERRY POINT, USA, 1986

Shown here in current low-visibility two-tone gray colors (Compass Gray and Light Compass Grey) with outline insignia counter-shaded on the fuselage. By now even the bright rescue markings have been toned down.



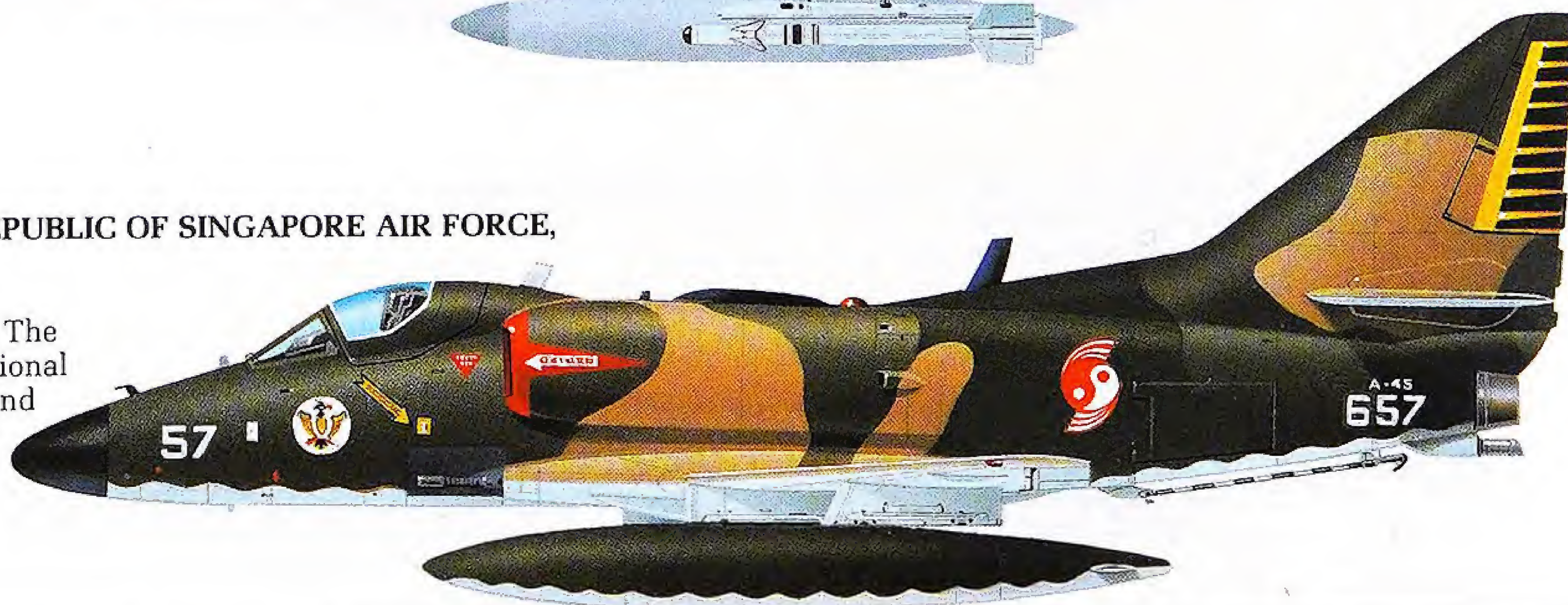
A-4G, 805 SQUADRON, ROYAL AUSTRALIAN NAVY, NOWRA, AUSTRALIA, 1981

Prior to their sale to New Zealand in 1984, RAN Skyhawks were seen finished in a matt Aircraft Gray and Light Admiralty Gray overall. Gloss White interior of intakes, wheel bays, etc. The 23in dia. roundel was displayed on the fuselage and tops of the wings.



A-4S, 143 (PHOENIX) SQUADRON, REPUBLIC OF SINGAPORE AIR FORCE, TENGAH, SINGAPORE, 1986

This plane displays a disruptive-style camouflage for its low-level attack role. The current scheme is toned down with national insignia and aircraft number in black and with no tail markings.



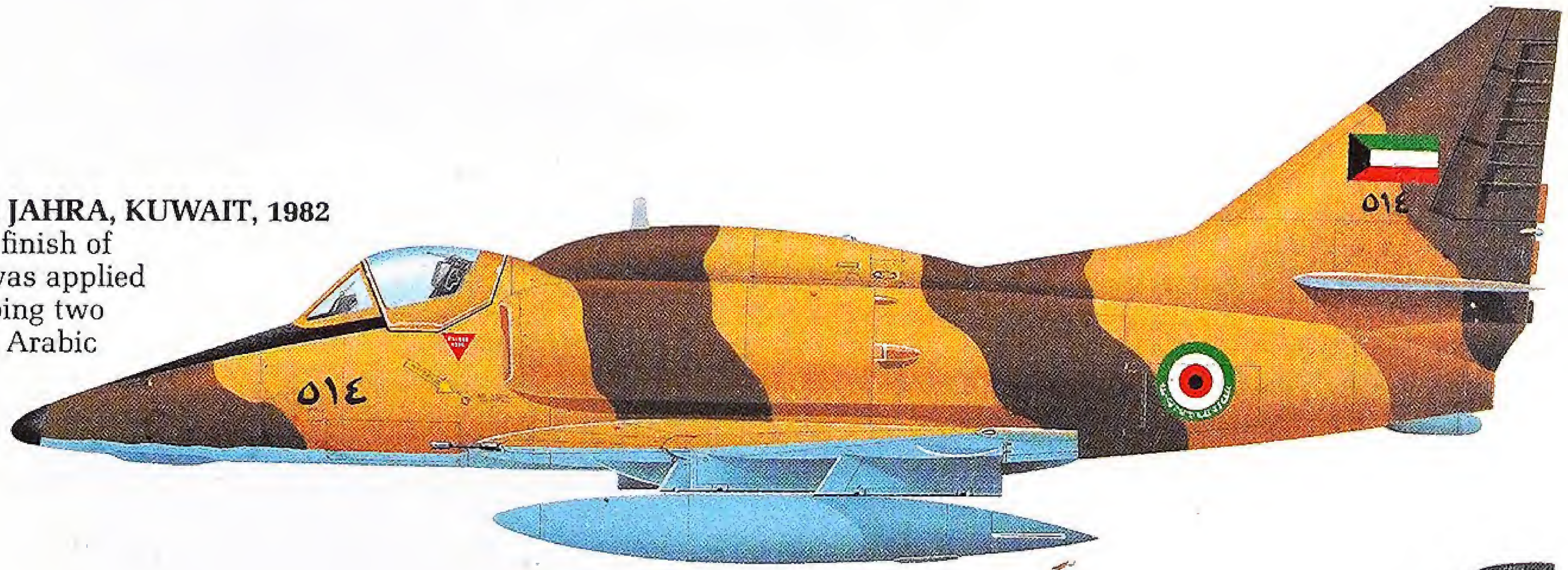
A-4Q, 3 ESCUADRILLA AERONAVAL DE ATAQUE, 3 ESCUADRA, ARGENTINE NAVY, RIO GRANDE, ARGENTINA, 1982

Here is the Dark Gray and White camouflage used at the time of the Falklands conflict. The unit code on the fuselage combines the individual aircraft number (04). 0657 on fin is manufacturer's construction number.



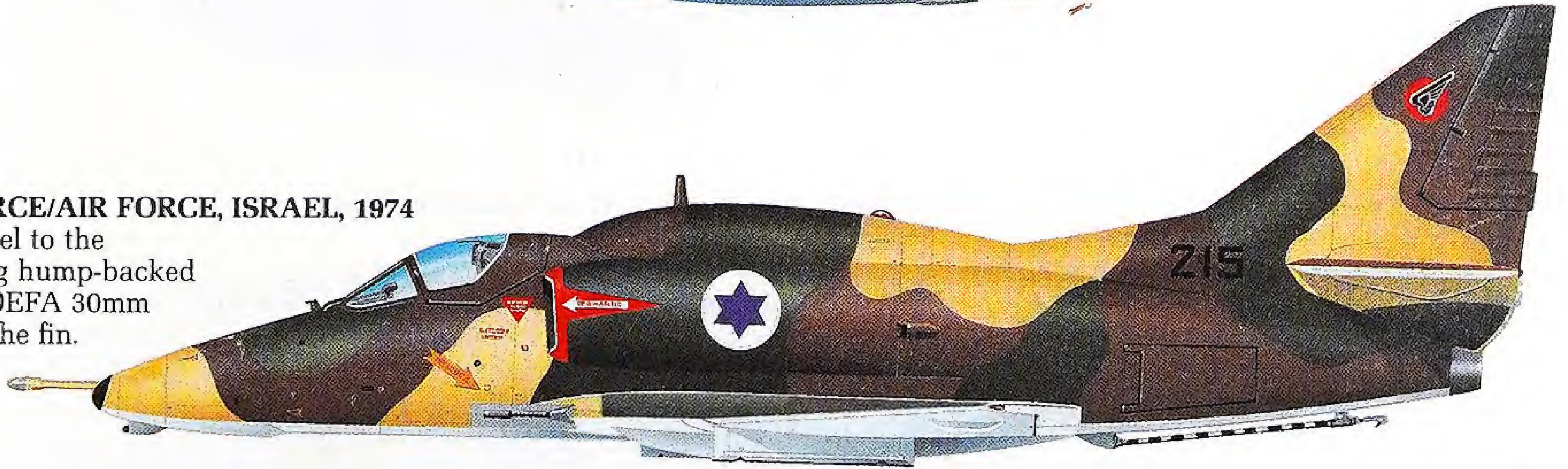
A-4KU, KUWAIT AIR FORCE, AL JAHRA, KUWAIT, 1982

A standard Middle Eastern desert finish of Brown, Sand and Deep Sky Blue was applied to 30 single-seat Skyhawks equipping two units of the Kuwait Air Force. The Arabic script reads 514.



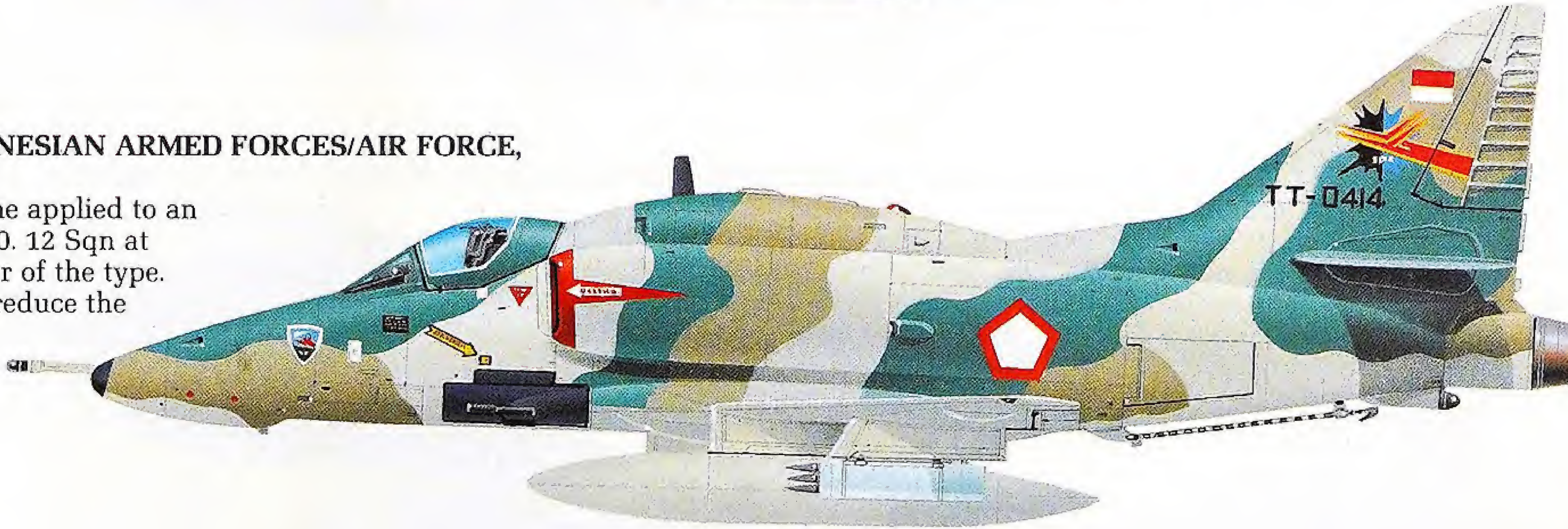
A-4E, ISRAELI DEFENSE FORCE/AIR FORCE, ISRAEL, 1974

The A-4E was modified in Israel to the Skyhawk II standard including hump-backed avionics housing and French DEFA 30mm cannon. The unit badge is on the fin.



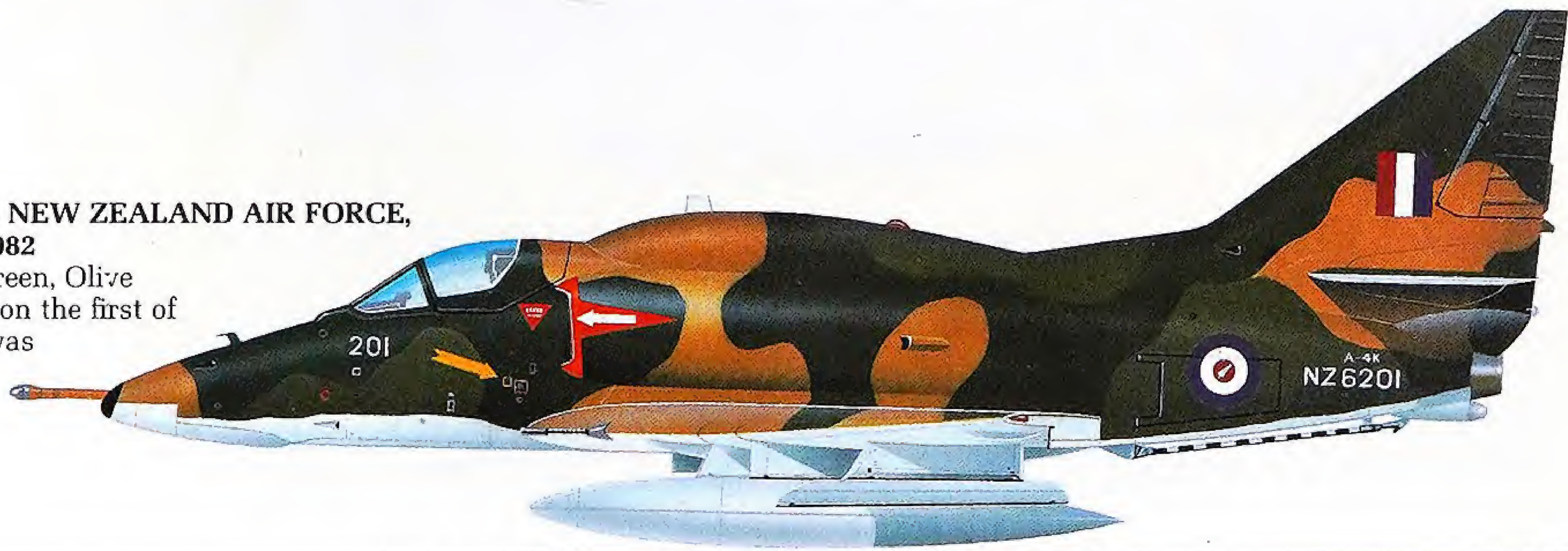
A-4E, 11 SQUADRON, INDONESIAN ARMED FORCES/AIR FORCE, MADIUN, INDONESIA, 1987

An unusual three-color scheme applied to an ex-Israeli A-4E bought in 1980. 12 Sqn at Pekanbaru is another operator of the type. Note the extended jetpipe to reduce the effect of a hit by heat-seeking missiles.



A-4K, 75 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, OHAKEA, NEW ZEALAND, 1982

Shown here in original Dark Green, Olive Drab and Light Brown scheme on the first of the RNZAF's aircraft. The type was updated in 1989, the fleet totaling 22 aircraft.

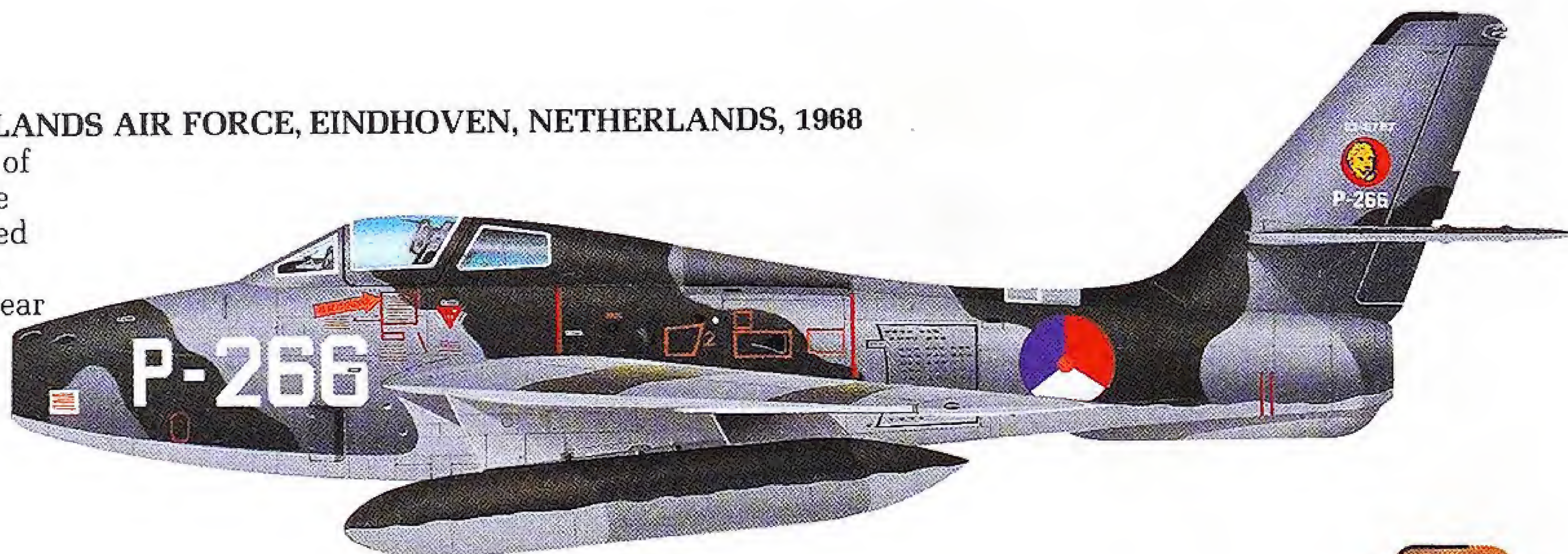


REPUBLIC F-84

The F-84 series began as a straight-wing jet-powered fighter-bomber which, although outclassed in Korea by the MiG-15, achieved a measure of success in the tactical role. Redesignated with swept wings, the F-84F version emerged as the main nuclear weapon-carrying fighter-bomber with NATO's air arms from 1954. The same year, the RF-84F Thunderflash reconnaissance version entered production, cameras being positioned in a lengthened nose with engine intakes at the wing roots. F-84F/RF-84F production totaled 3428.

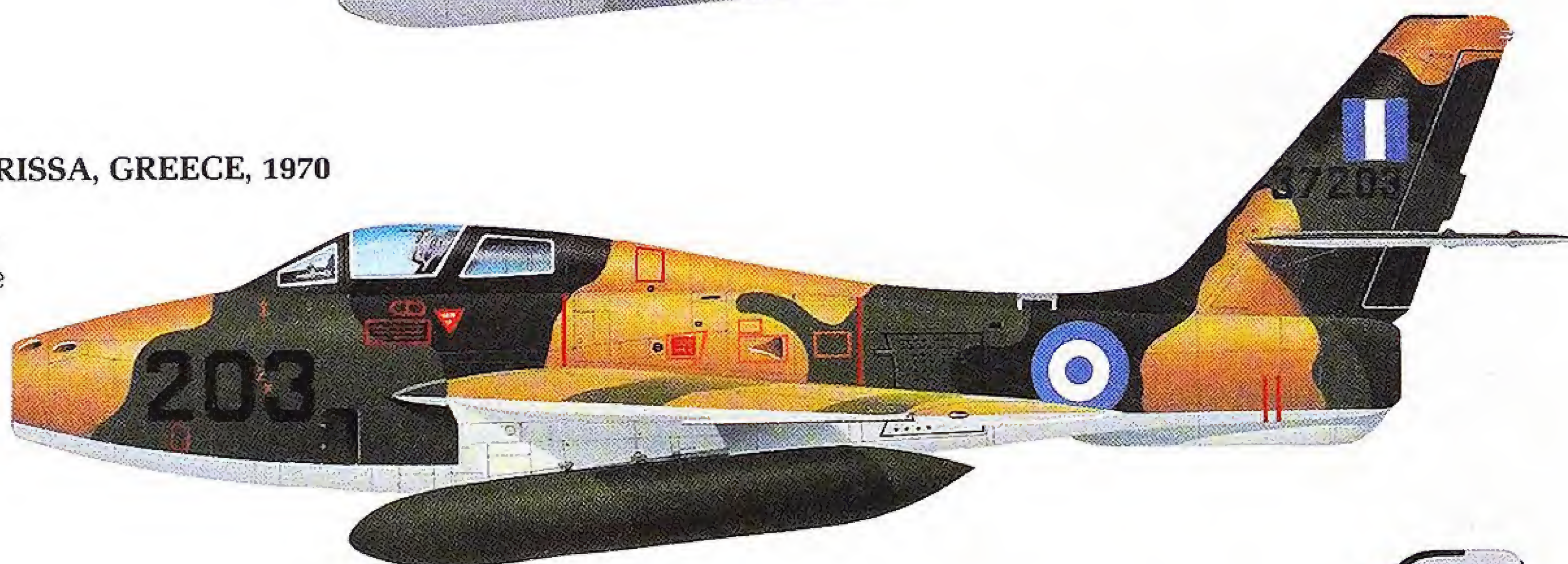
F-84F, 315 SQUADRON, ROYAL NETHERLANDS AIR FORCE, EINDHOVEN, NETHERLANDS, 1968

Six squadrons of F-84Fs and one squadron of RF-84Fs totaling 204 aircraft operated in the RNethAF from the mid-1950s. The red outlined areas on the fuselage are inspection panels, whilst the two parallel red lines under the rear fuselage are trestle points used for maintenance purposes.



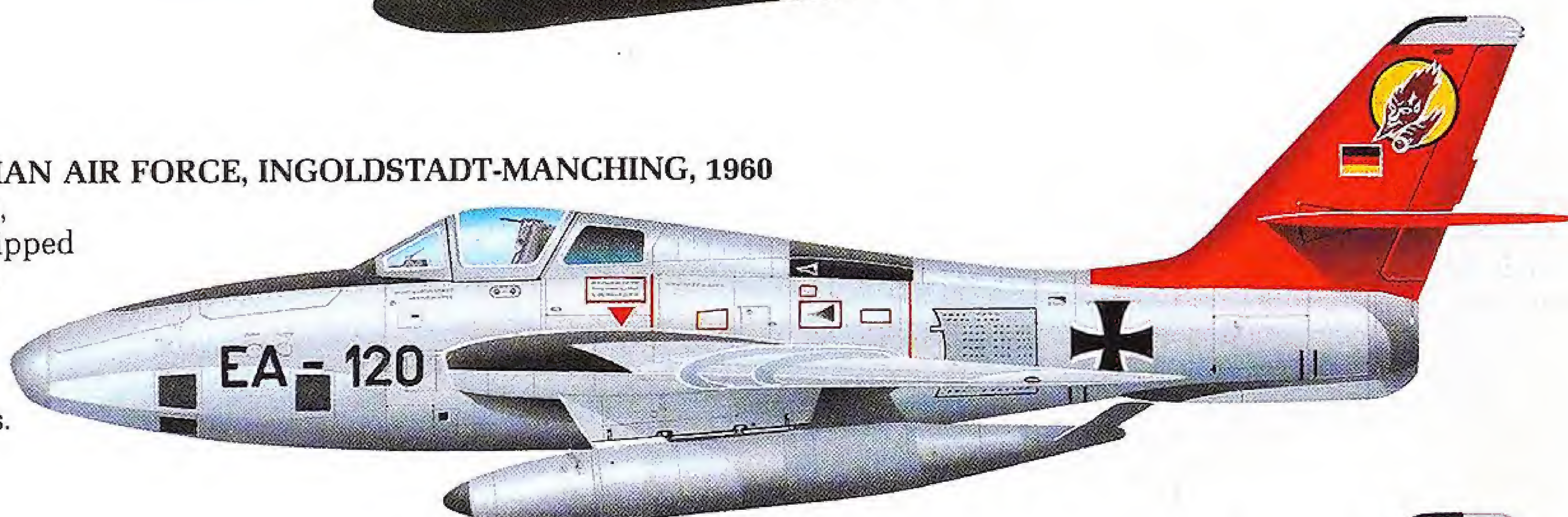
F-84F, 110 WING, GREEK AIR FORCE, LARISSA, GREECE, 1970

Greece proved to be the last operator of the venerable F-84 series, flying a small number of 'Streaks' up to 1986 outlived only by some RF-84Fs which soldiered on to mid-1989. This machine repeats the last three digits of its serial number on the nose.



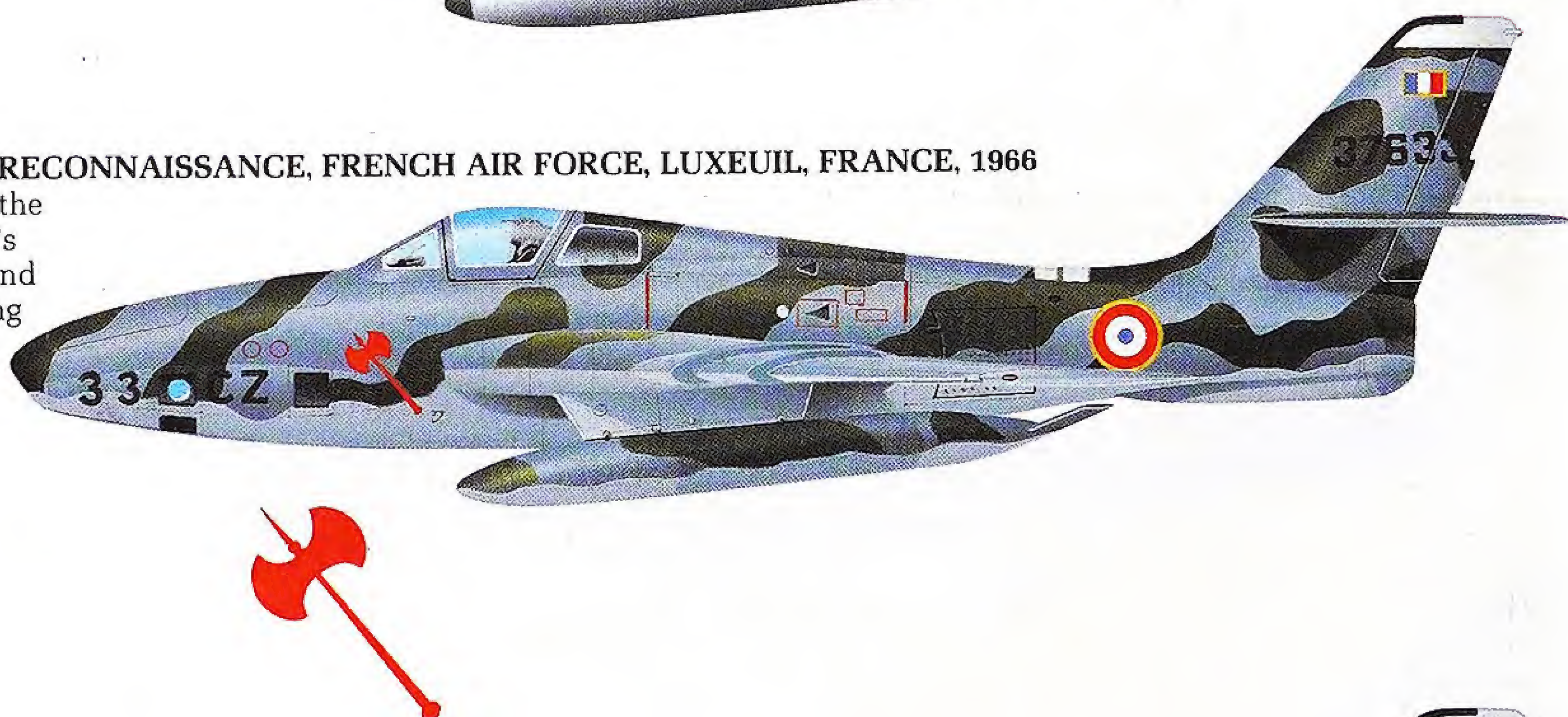
RF-84F, 1 STAFFEL AG 51, WEST GERMAN AIR FORCE, INGOLDSTADT-MANCHING, 1960

The Luftwaffe had two Wings of RF-84Fs, each with two 26-aircraft squadrons, equipped between July 1959 and January 1967. The unit's devil's head emblem shown on the fin of this red-tailed aircraft gave way shortly afterwards to an owl which currently adorns AG 51s RF-4E Phantoms.



RF-84F, 1 ESC. "BELFORT", 33 ESC. DE RECONNAISSANCE, FRENCH AIR FORCE, LUXEUIL, FRANCE, 1966

Disruptive green-gray camouflage covers the top surfaces of this aircraft with the unit's battle axe emblem by the engine intake and the unit number and aircraft code flanking one of the oblique camera ports.



RF-84F, TACTICAL RECONNAISSANCE SQUADRON, CHINESE NATIONALIST AIR FORCE, TAIWAN, 1961

Operated until their withdrawal from service in 1965 on tactical missions along the coast of mainland China, the silver-finished RF-84Fs provided current information on troop and naval movements opposite Taiwan. The yellow and black bands on wings and fuselage are identification markings.

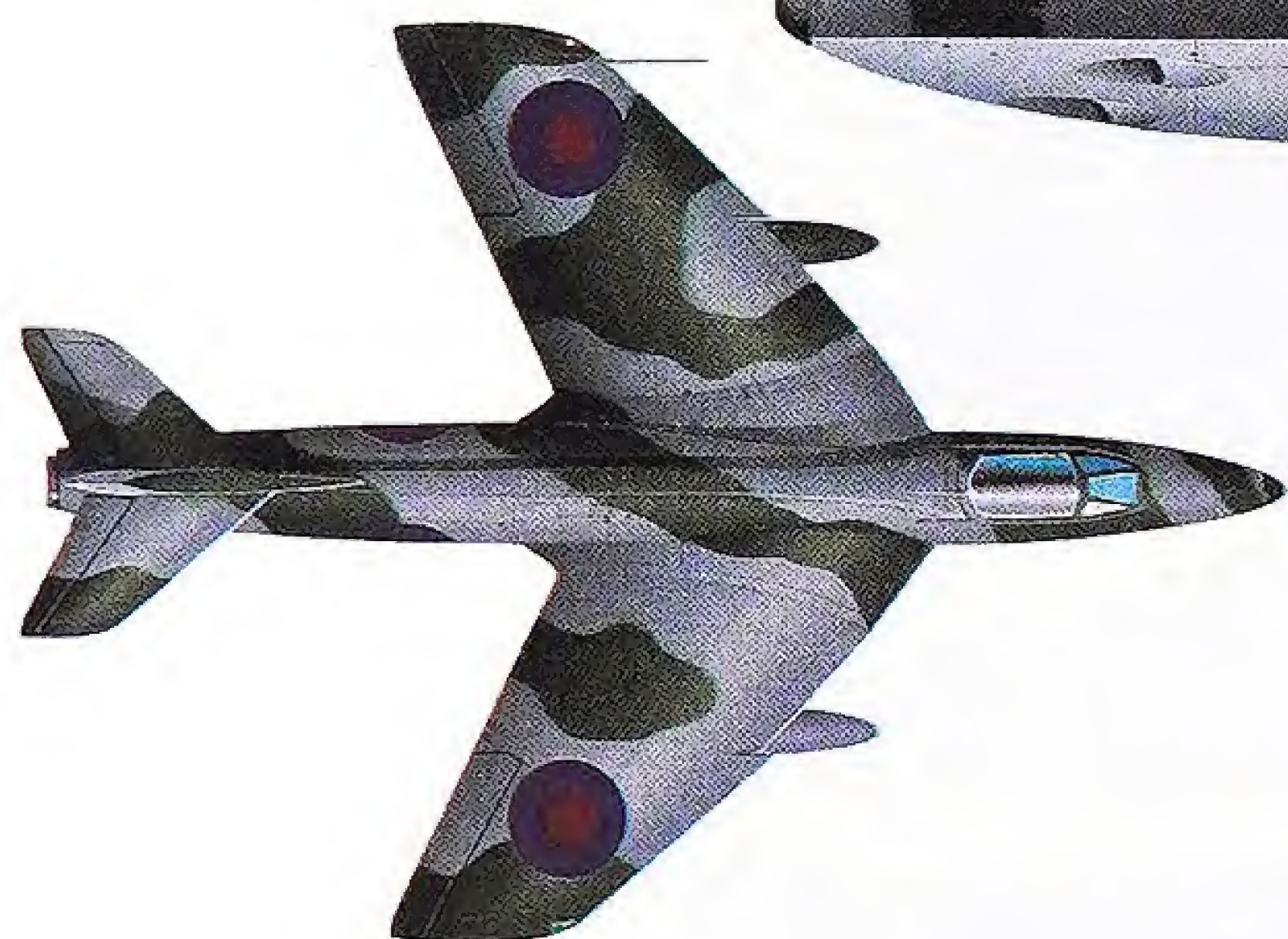
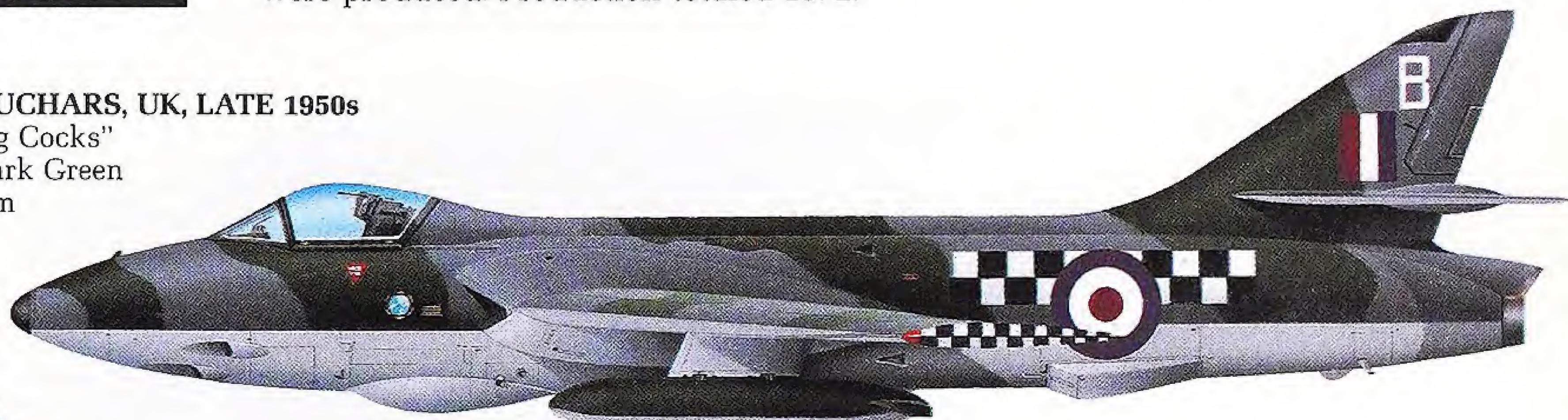


HAWKER HUNTER

A good-looking and highly successful fighter, the Hunter was once the backbone of RAF Fighter Command, and the type served in 21 air arms. The principal engine was the Rolls-Royce Avon and weapons comprised four 30mm Aden cannon and underwing pylons for bombs, rockets and/or drop tanks. A special reconnaissance nose could be fitted to the standard airframe, while for training, two-seater versions were produced. Production totaled 1972.

F. Mk 6, 43 SQUADRON, RAF LEUCHARS, UK, LATE 1950s

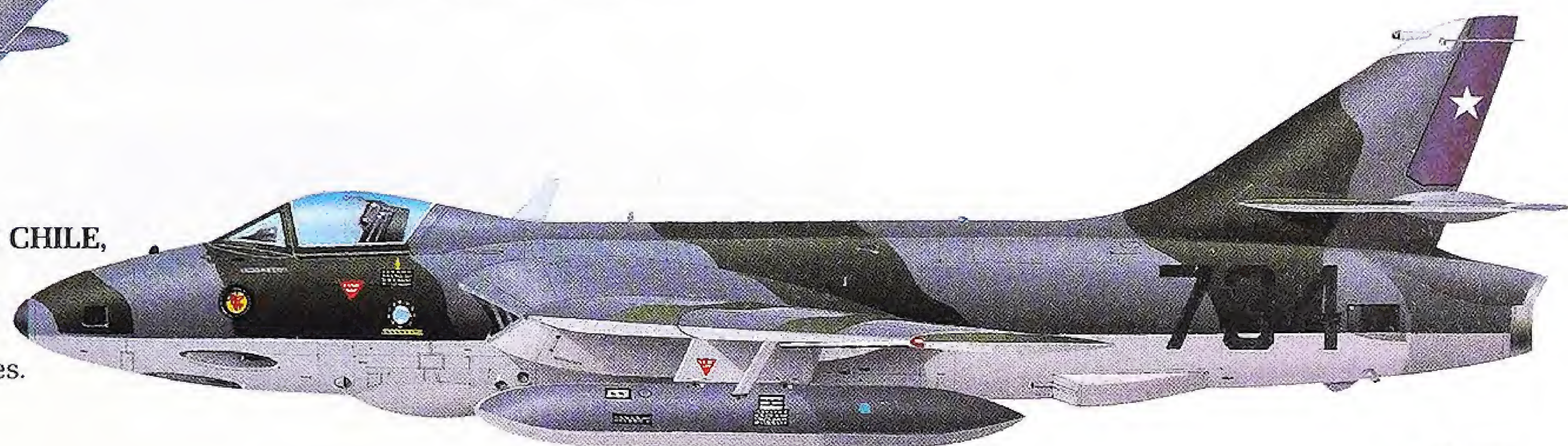
An aircraft of the famous "Fighting Cocks" squadron, camouflaged in gloss Dark Green and Dark Sea Gray with Aluminum (silver) undersides.



The top surface scheme for RAF-operated aircraft. The upper wing roundel style appeared from 1970 and was matt Post Office Red and Roundel Blue.

FR. Mk 71A, FUERZA AEREA DE CHILE, EARLY 1980s

This converted, ex-RAF F.4 (XF317) retains UK day fighter finish, but with Light Aircraft Gray undersides.



Mk 12, RAE FARNBOROUGH, UK, 1964

Operated on equipment trials, the aircraft had a high gloss finish which made it easier to maintain. This plan view shows the roundel position. The aircraft was subsequently withdrawn from use and employed for fire-fighting practice.



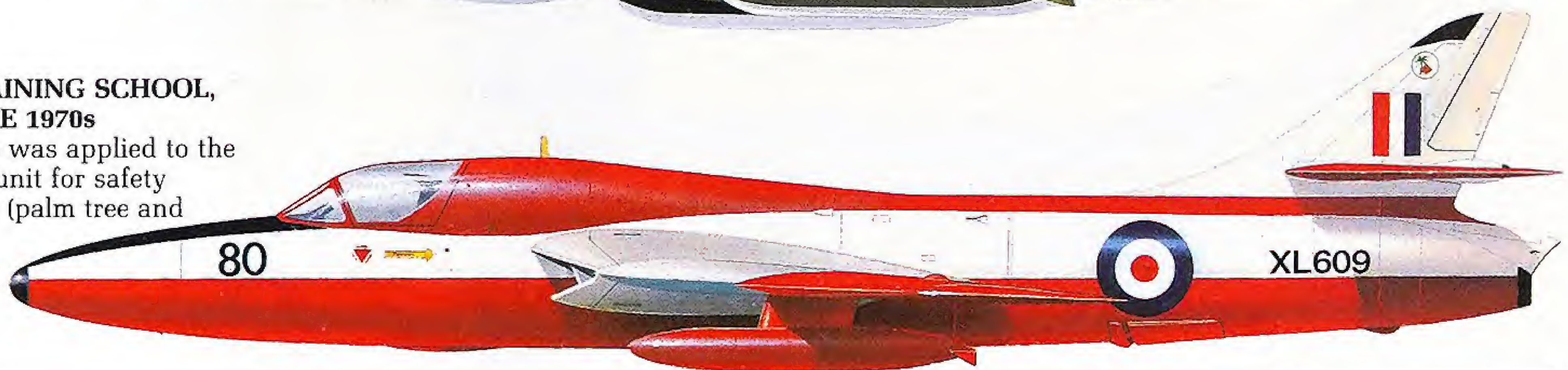
T. Mk 75A, 141 SQUADRON, REPUBLIC OF SINGAPORE AIR FORCE, TENGAH, SINGAPORE, EARLY 1980s

This is a trainer version displaying bright markings before high visibility colors were deleted.



T. Mk 7, 4 FLYING TRAINING SCHOOL, RAF VALLEY, UK, LATE 1970s

A high-visibility scheme was applied to the aircraft of this training unit for safety reasons. The unit badge (palm tree and pyramid) is on the fin.



NORTH AMERICAN F-100

Characterizing the pioneering days of American jet fighter development in the Fifties, the Super Sabre was the first western fighter capable of level supersonic performance. The first YF-100A flew on 25 May 1953, and the F-100A entered service the following year as the USAF's first Century-series fighter. Principal variants were the F-100C, D and two-seat F with production totaling 2294. Apart from the USA, other users included France, Denmark and Turkey.

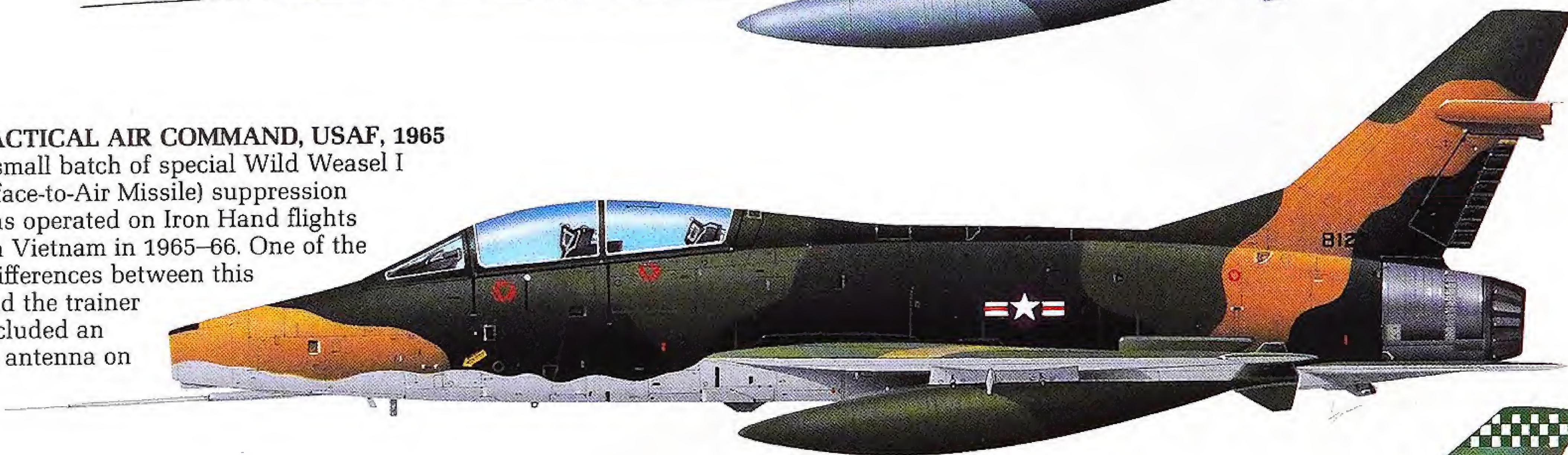
F-100D, 20th TACTICAL FIGHTER WING, USAF, WETHERSFIELD, UK, 1960

The silver-finished "Huns" of the three squadrons that formed this unit were familiar to residents of East Anglia from the end of the Fifties. At the tip of the fin is the unit badge and alongside is a unit citation award.



F-100F, TACTICAL AIR COMMAND, USAF, 1965

First of a small batch of special Wild Weasel I SAM (Surface-to-Air Missile) suppression conversions operated on Iron Hand flights over North Vietnam in 1965-66. One of the external differences between this aircraft and the trainer version included an additional antenna on the fin.



F-100D, 308th TACTICAL FIGHTER SQN, 31st TFW, USAF, TUY HOA, VIETNAM, 1970

An example of a Vietnam-based aircraft operated on fighter-bomber missions against Viet Cong targets in the South. On the aircraft's dorsal spine is a command radio antenna.

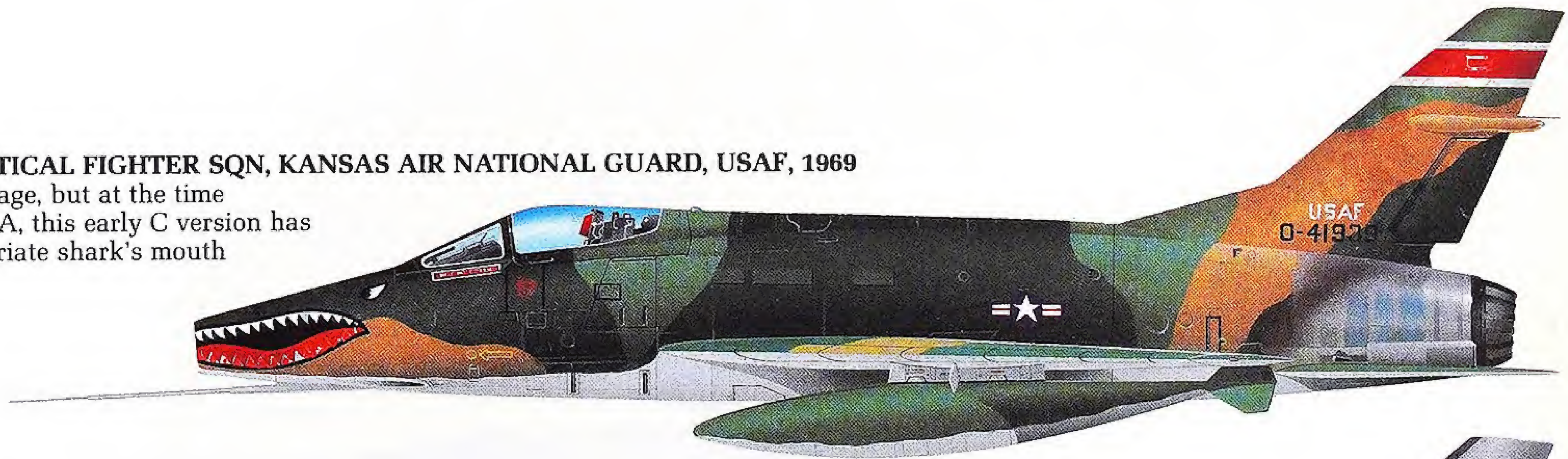


Top planview of "Jeanne Kay". The three colors were effective when seen from above and against the hills of Vietnam, but aerial opposition was almost non-existent for these aircraft which operated extensively in the South.



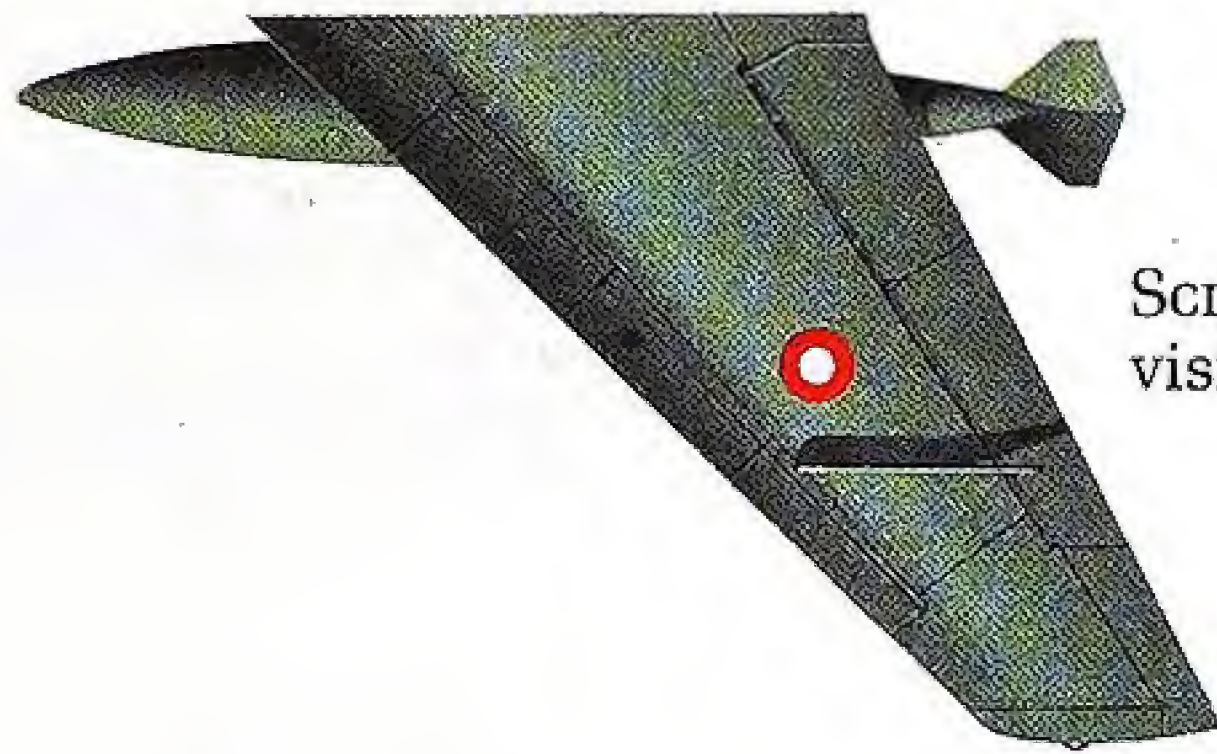
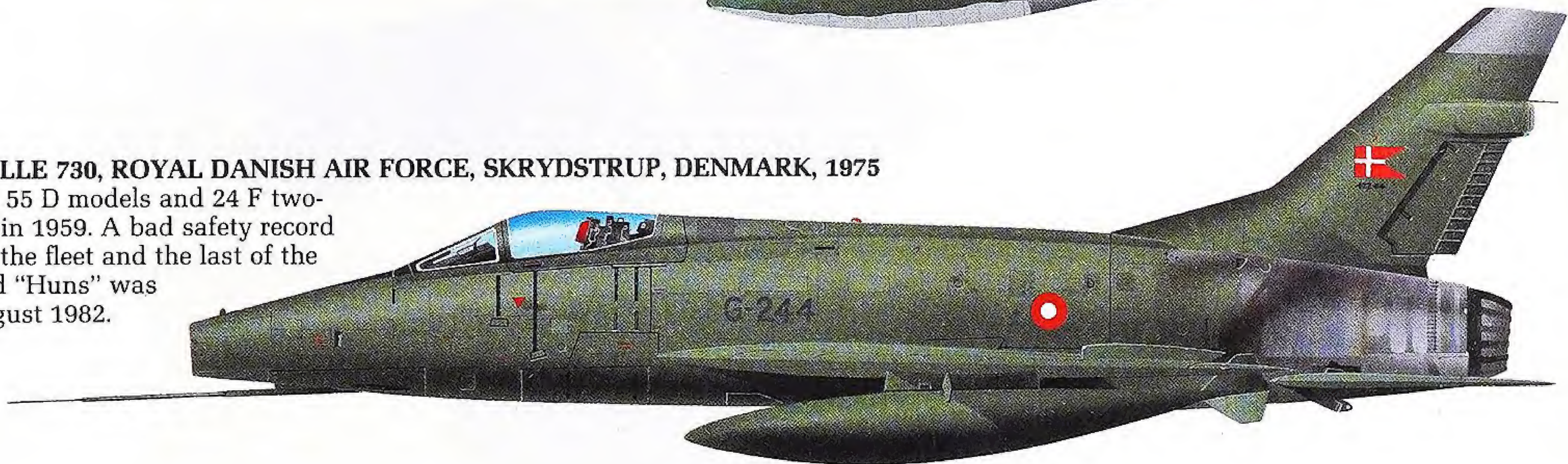
F-100C, 127th TACTICAL FIGHTER SQN, KANSAS AIR NATIONAL GUARD, USAF, 1969

In SE Asia camouflage, but at the time stationed in the USA, this early C version has received an appropriate shark's mouth marking.



F-100D, ESKADRILLE 730, ROYAL DANISH AIR FORCE, SKRYDSTRUP, DENMARK, 1975

Denmark received 55 D models and 24 F two-seaters beginning in 1959. A bad safety record more than halved the fleet and the last of the Olive Drab-colored "Huns" was withdrawn in August 1982.



Scrap view showing the position of the low-visibility Danish roundel.

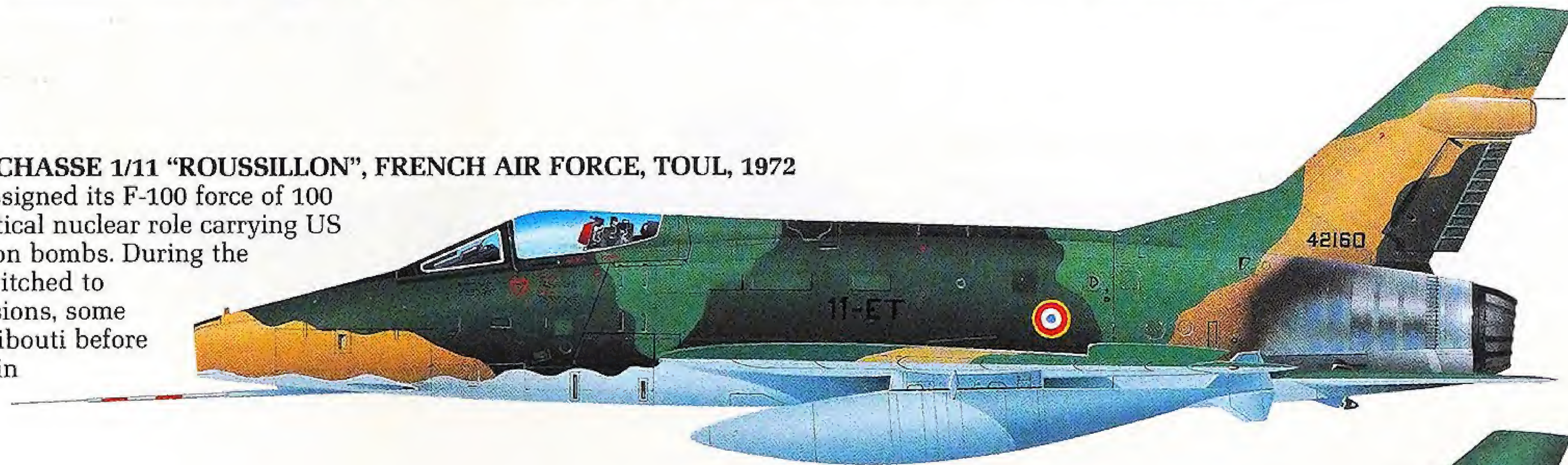
F-100D, ROYAL DANISH AIR FORCE, DENMARK, 1976

Three squadrons operated F-100s, 725 at Karup and 727 and 730 at Skrydstrup. Aircraft were initially delivered and flown in natural metal finish, but in 1969 low visibility colors were adopted. This particular aircraft crashed in May 1977.



F-100D, ESC. DE CHASSE 1/11 "ROUSSILLON", FRENCH AIR FORCE, TOUL, 1972

France initially assigned its F-100 force of 100 aircraft to the tactical nuclear role carrying US Mk 43 one-megaton bombs. During the Seventies they switched to conventional missions, some being based in Djibouti before final withdrawal in December 1978.



F-100C, 111th SQUADRON, TURKISH AIR FORCE, 1st JET BASE, ESKISEHIR, TURKEY, 1973

More than 200 F-100s found their way to Turkey, including 87 originally supplied in the late-1950s. Any Hun given a coat of paint lost it around the rear fuselage due to heat as shown on this early C variant.

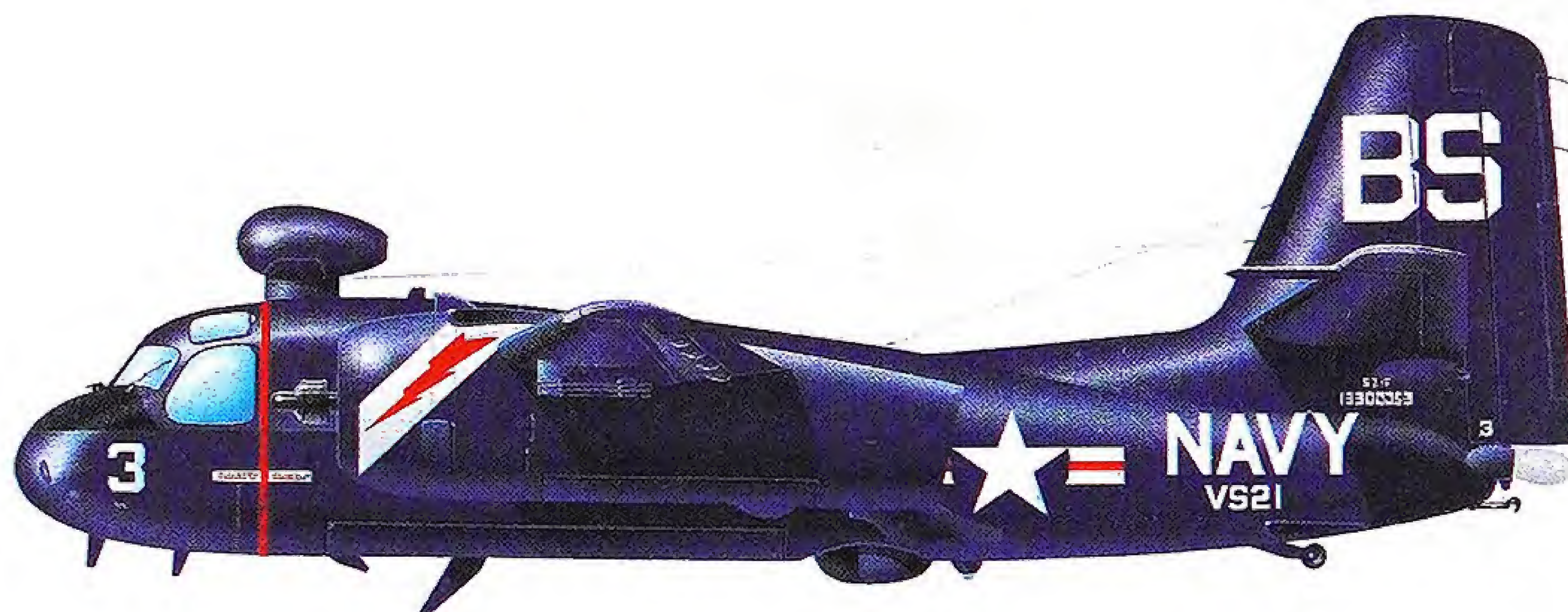


GRUMMAN TRACKER

The Tracker's main claim to fame, apart from its longevity in service, is that it was the first aircraft specifically designed to perform all phases of the ASW mission – detection, identification, tracking and destruction. First flight of the XS2F-1 was on 4 December 1952 with Service entry in 1954. Redesignated S-2 series in 1962, the design was subsequently updated and spawned the Trader carrier-based transport and the Tracer AEW aircraft. S-2 production reached 1281.

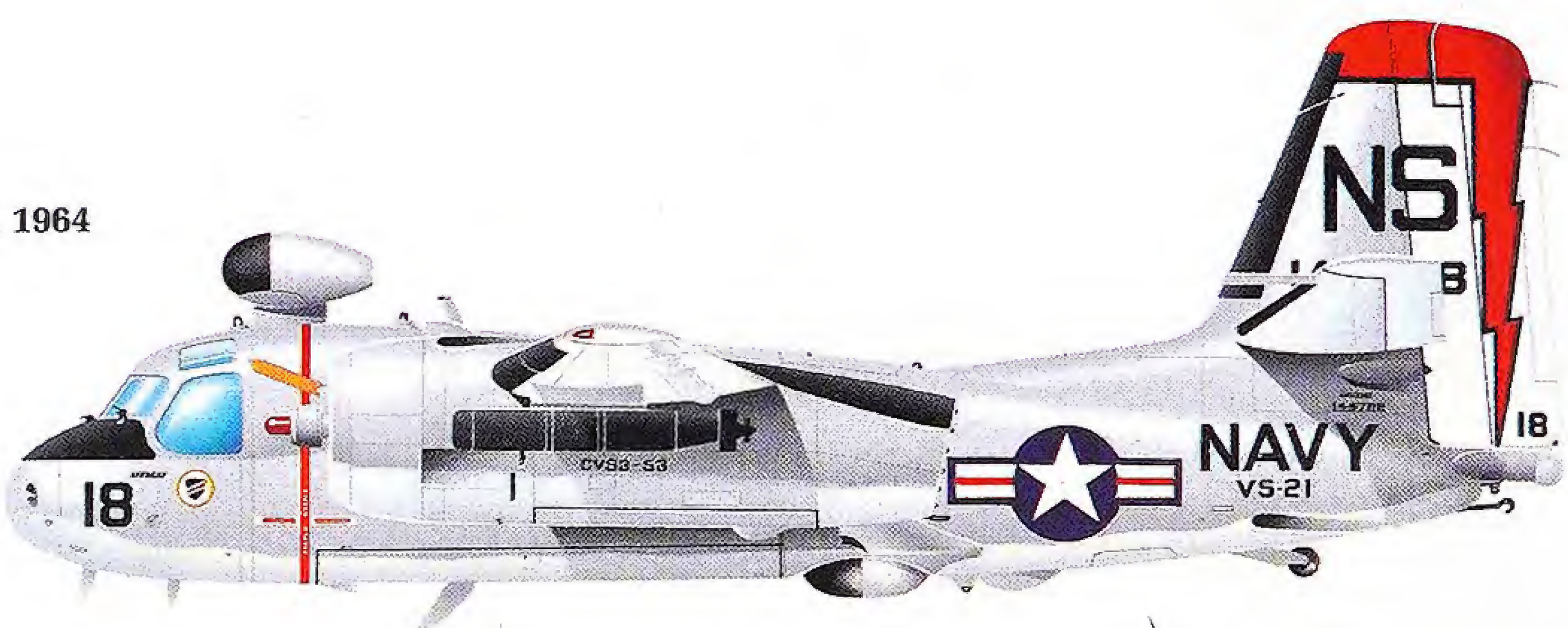
S-2C, VS-21, US NAVY, 1956

This version, alias S2F-2, has an asymmetric (port side) weapons bay extension to carry a new torpedo. It is pictured shortly before the Glossy Sea Blue finish was phased out in favor of the lighter Gull Gray and White scheme. VS-21 was the Navy's first designated VS squadron.

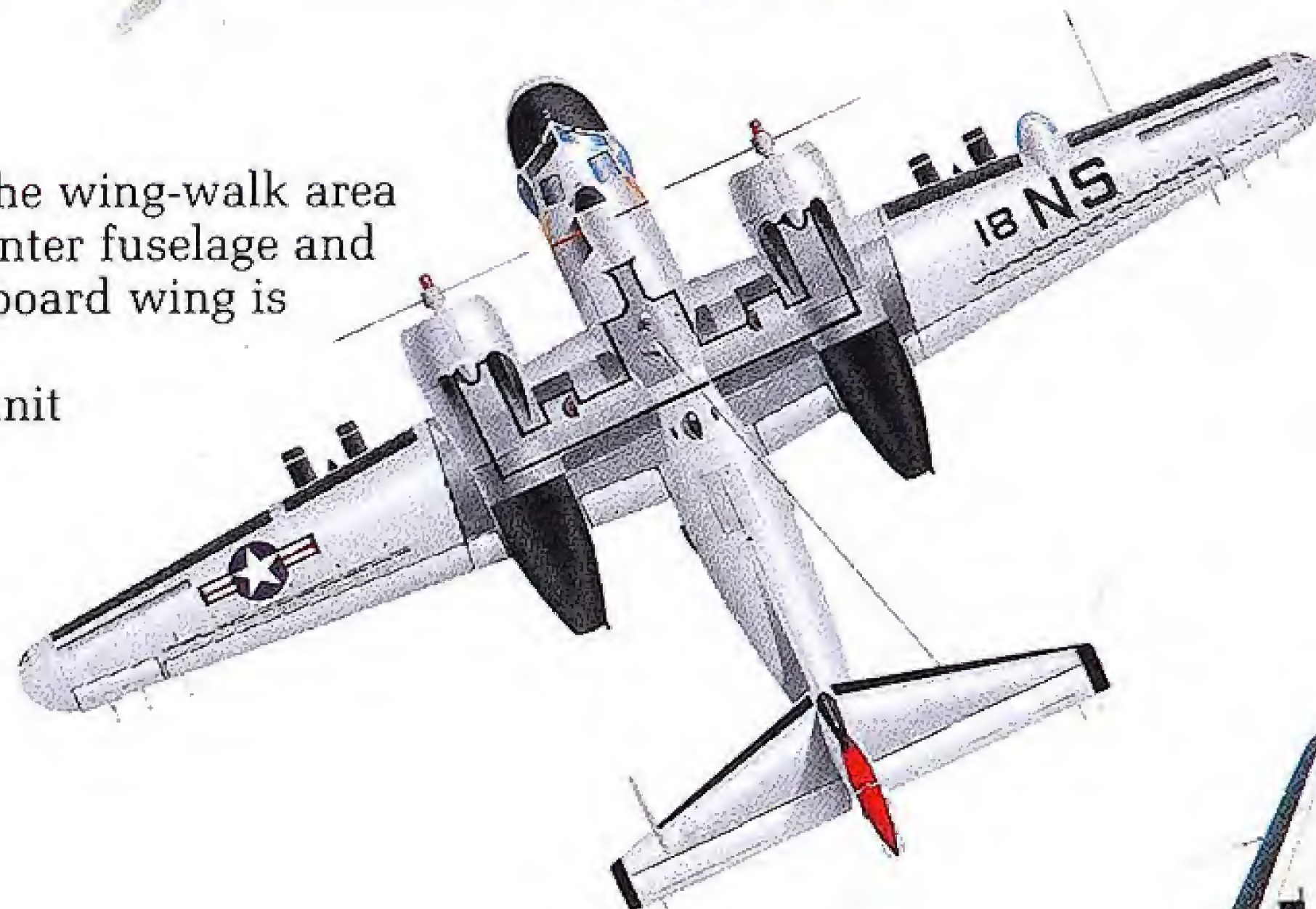


S-2E, VS-21, US NAVY, USS KEARSAGE (CVSG-53), 1964

Lumps and bumps abounded on a 'Stoof' (nickname for the Tracker). Above the cockpit was an ECM antenna, under the fuselage was a retractable radar scanner and under the rudder was a retractable MAD (Magnetic Anomaly Detector) boom; numerous aerials and underwing weapons were also fitted.

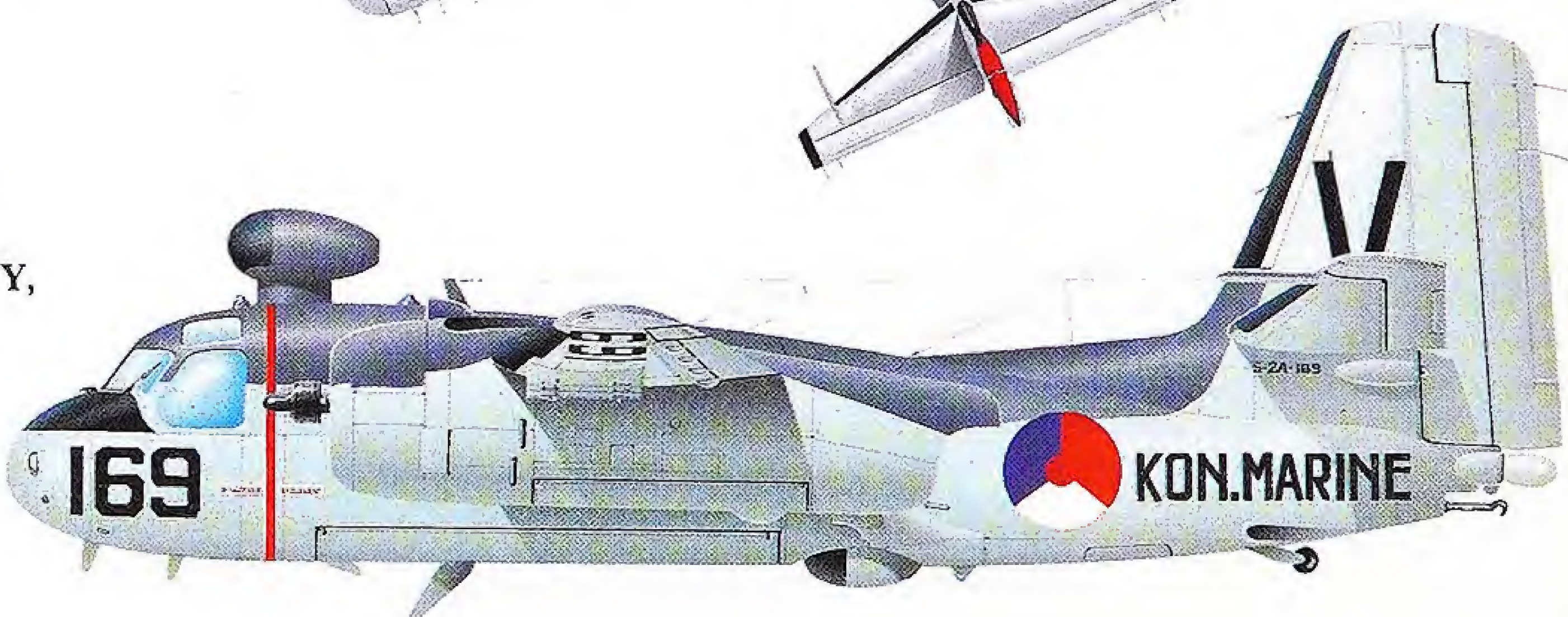


Plan view showing the wing-walk area marked above the center fuselage and engines. On the starboard wing is the aircraft number (24in high) and the unit identifying letters (36in high).



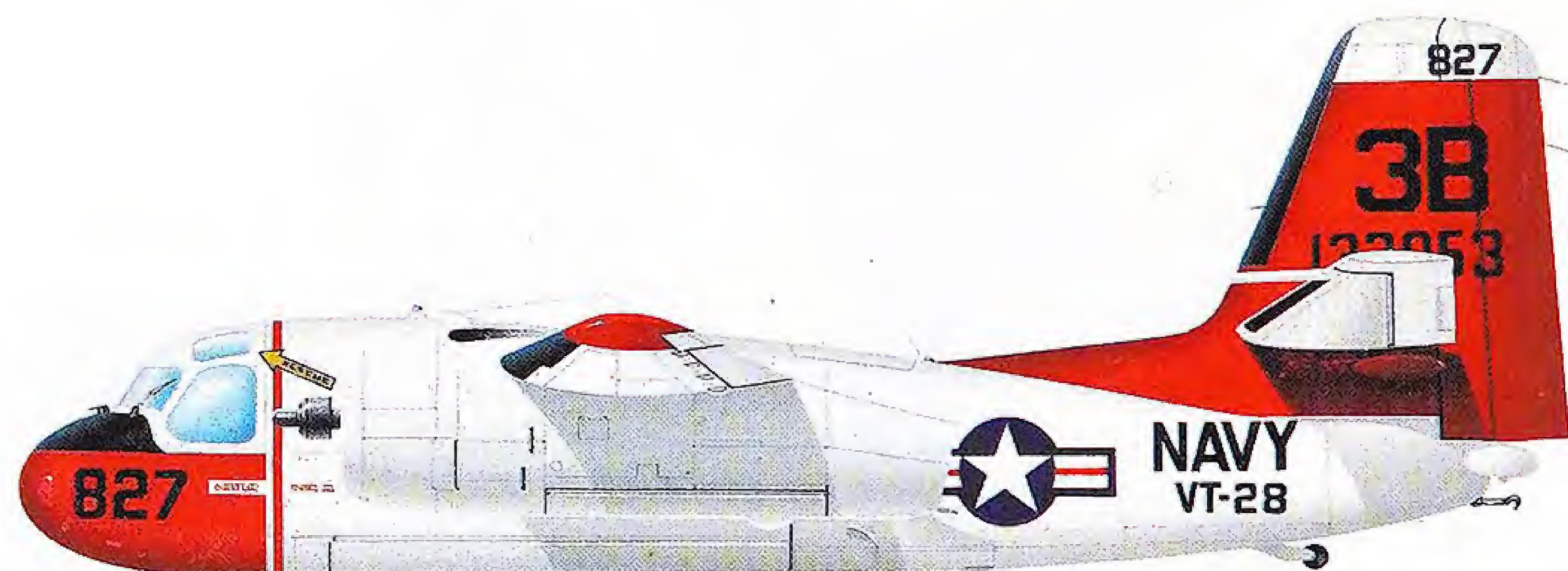
S-2A, 2 SQUADRON, ROYAL NETHERLANDS NAVY, VALKENBURG, NETHERLANDS, 1967

In the early 1960s, the Dutch Navy took delivery of 28 S-2A and 17 CS-2A Trackers. The last aircraft of this type was withdrawn from service in 1975, six being passed on to the Turkish Navy. KON.MARINE is an abbreviation for *Koninklijke marine*.



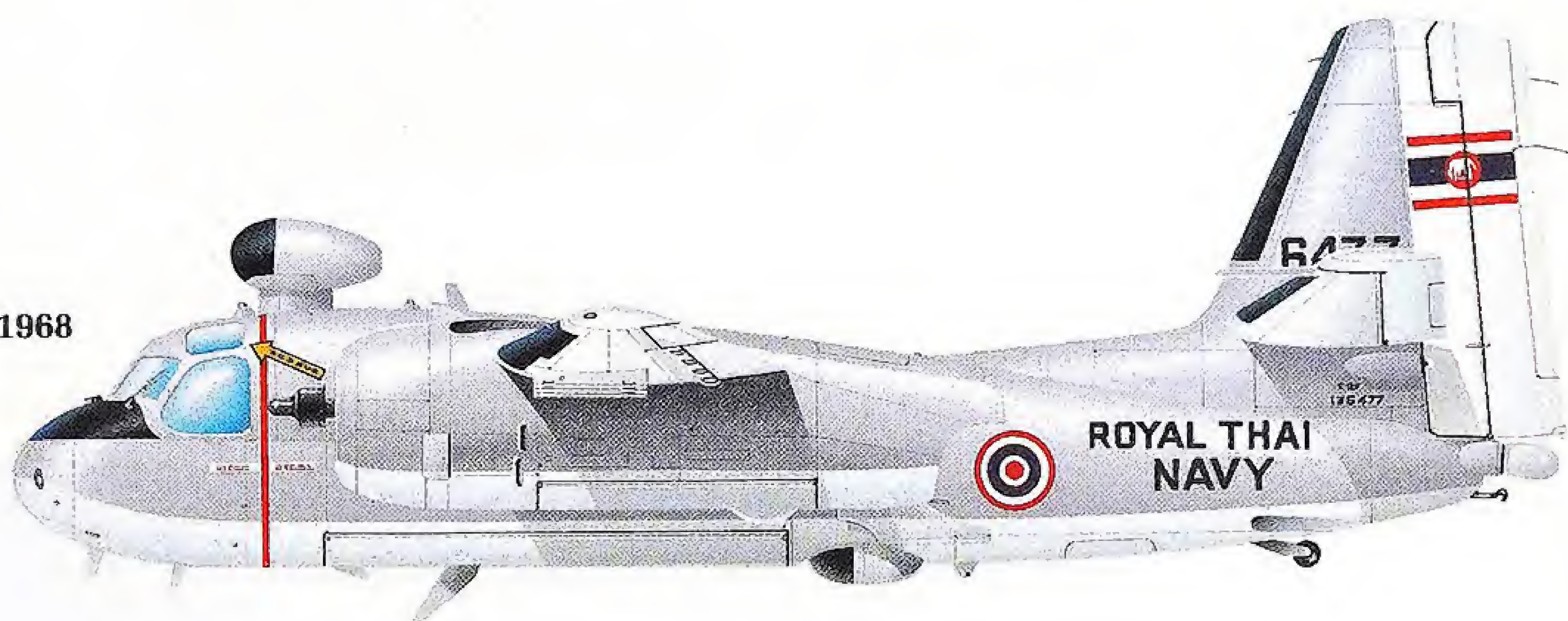
TS-2A, VT-28, US NAVY, CORPUS CHRISTI NAS, USA, JULY 1968

A total of 207 S-2As were converted to ASW operator trainers, retaining the search equipment. The red-orange finish identifies an aircraft used for non-operational purposes.



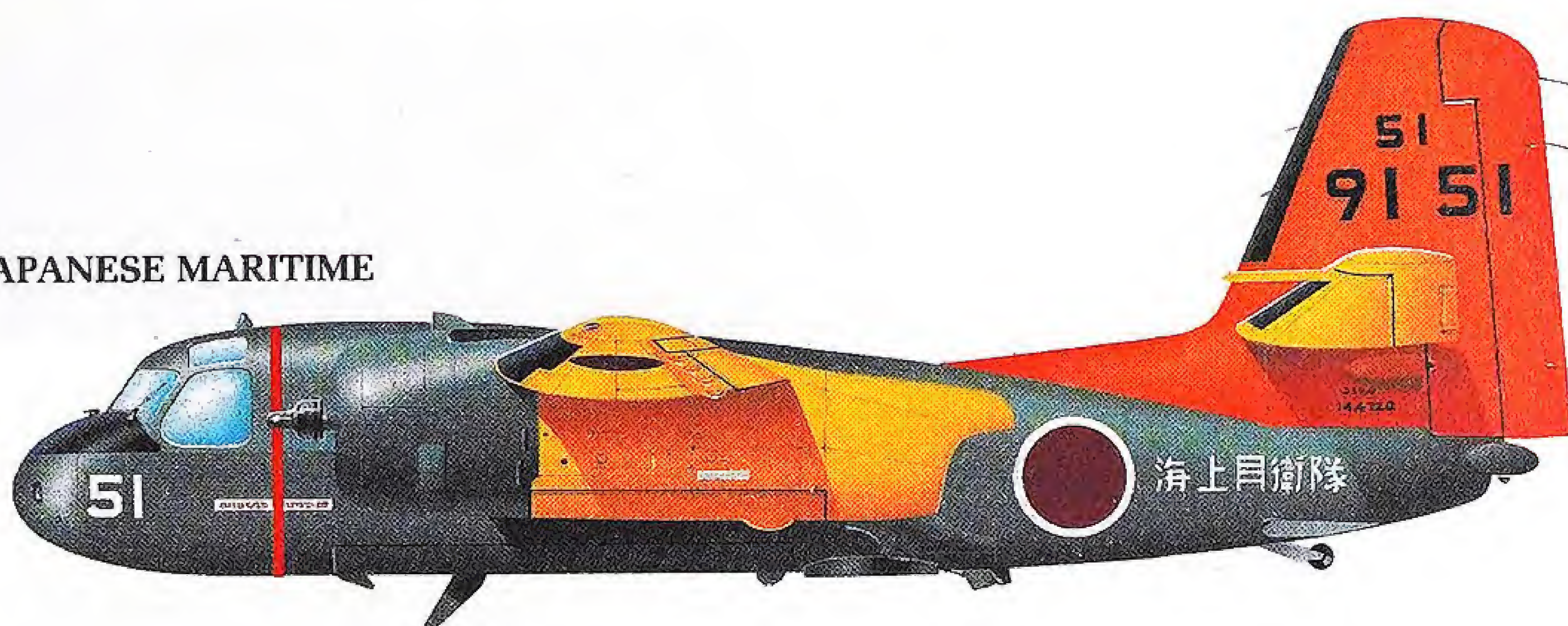
S-2F, ROYAL THAI NAVY, BANGKOK, THAILAND, 1968

Ten aircraft were delivered in 1966 and operated on maritime surveillance tasks over the Gulf of Thailand. The survivors are currently being considered for possible conversion into S-2(T) turboprop-powered versions. Colors are USN Gull Gray and White.



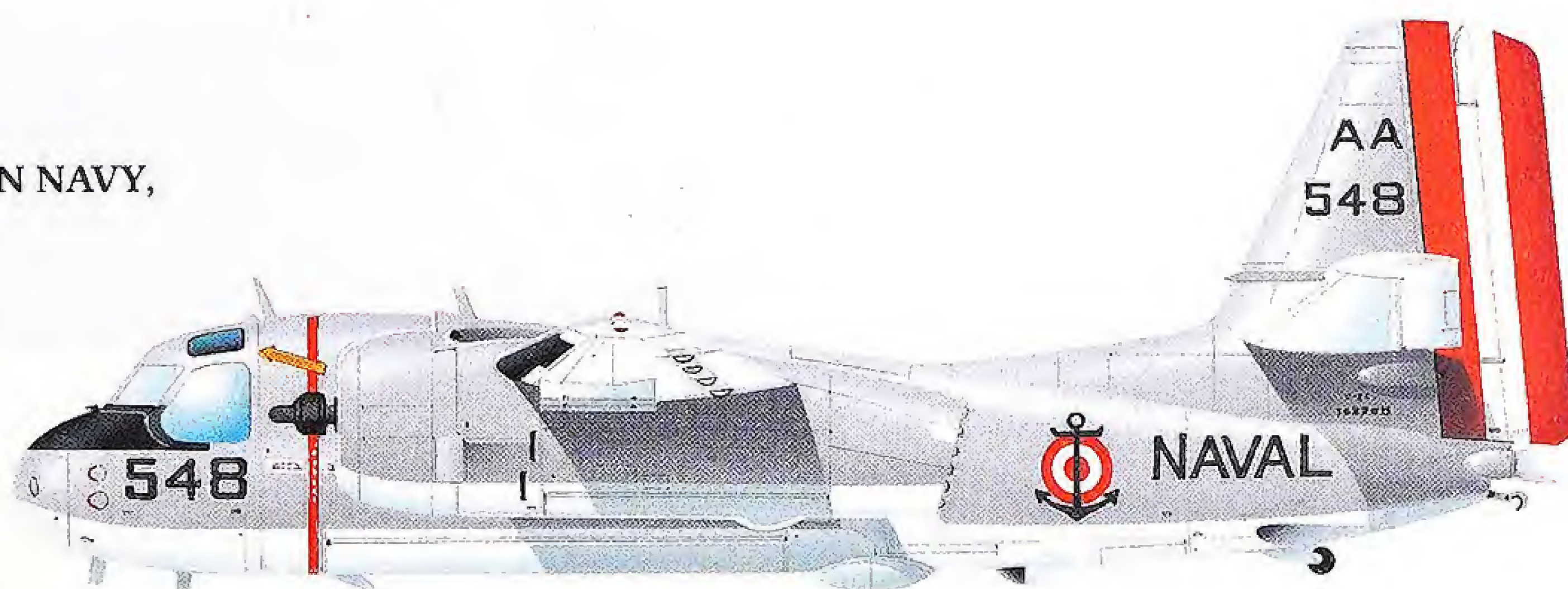
US-2A (S2F-1U), 61st KOKUTAI, KOKU-SHUHDAN, JAPANESE MARITIME SELF-DEFENSE FORCE, ATSUGI, JAPAN, 1974

Another example of a utility aircraft brightly colored for safety purposes, in this case a target-towing/transport version of the Tracker.



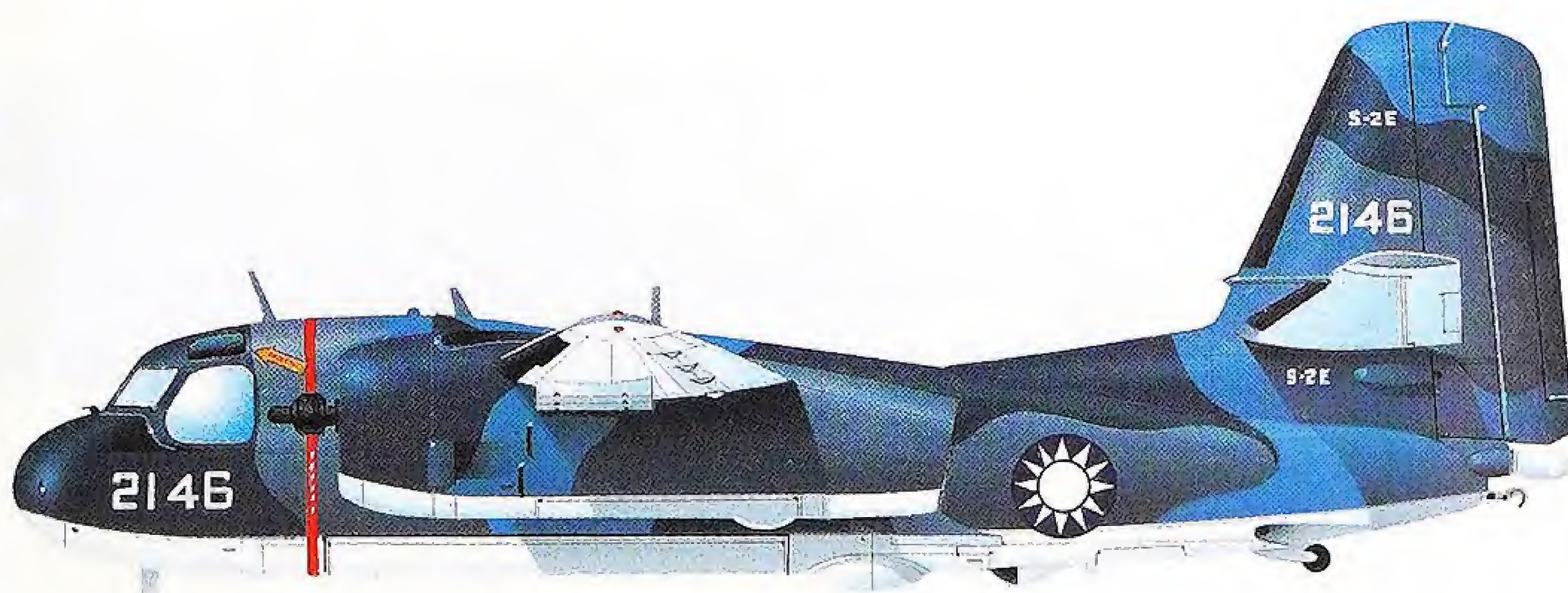
S-2E, ESCUADRON ANTISUBMARINO 12, PERUVIAN NAVY, JORGE CHAVEZ AB, LIMA, PERU, 1987

Seven E and four G versions were in recent service with the Peruvian Navy in the scheme shown here. They have been supplied since 1976 and include some of the latest equipment modifications to enable them to conduct ASW missions effectively against modern quiet-running submarines.



S-2E/F, REPUBLIC OF CHINA NAVY, TAIWAN, 1986

This unusual camouflage for over-water use appears to have shades reminiscent of those used by the US Navy in 1943. Colors are similar to Blue Gray, Semi-gloss Sea Blue and Intermediate Blue with what seems like light gray undersides. About 32 of these aircraft are in use.



S-2E, SOUTH KOREAN NAVY, 1987

About 25 ex-US Navy Trackers are in service and, like many operated by other navies, they retain their original coloring. Every inch of space was utilized in the S-2 design. For instance, the rear of each engine nacelle is used to carry and launch up to 16 sonobuoys.

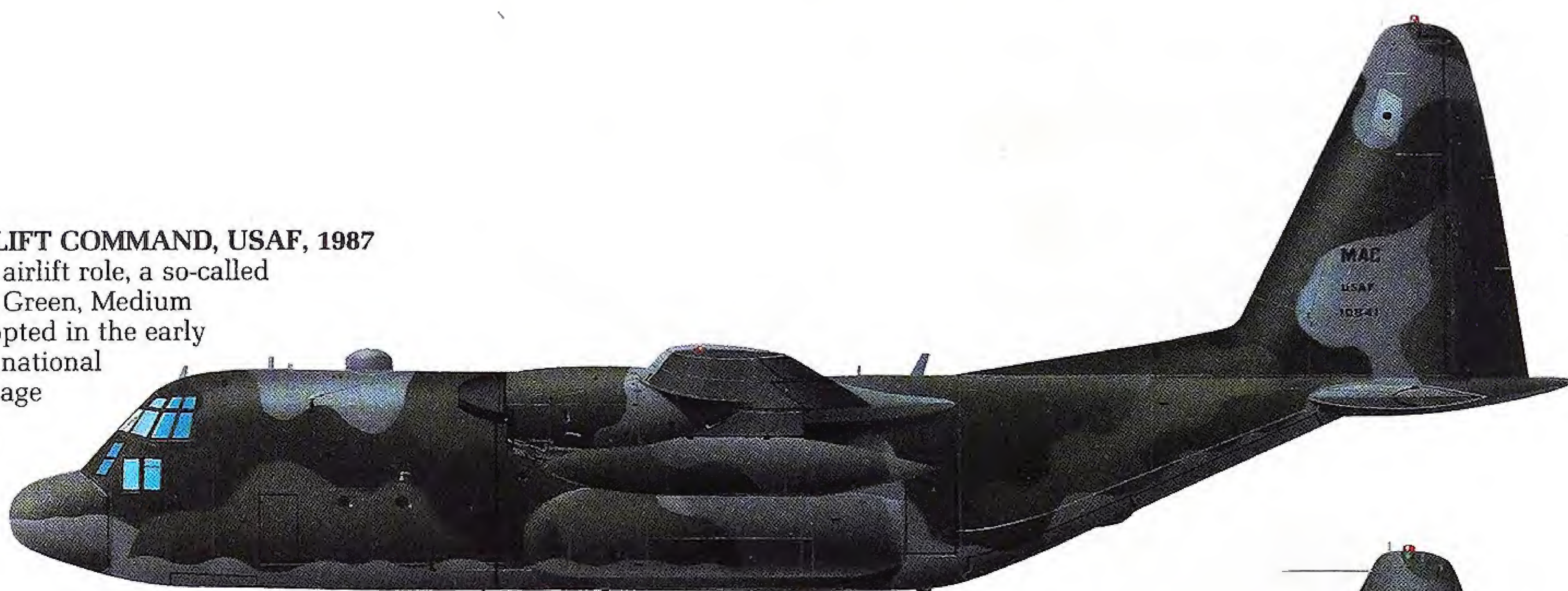


LOCKHEED C-130 HERCULES

Still meeting the needs of military and civil cargo operators around the world, the Hercules continues in production 35 years after its first flight on 23 August 1954. More than 1900 have been ordered or delivered. As well as transport versions, there are tanker, gunship, surveillance and reconnaissance variants. There is also a series of civil cargo Hercules, some with lengthened fuselages which have been adopted by military users.

C-130H, MILITARY AIRLIFT COMMAND, USAF, 1987

For the low-level tactical airlift role, a so-called "Lizard" scheme of Dark Green, Medium Green and Gray was adopted in the early Eighties. The matt black national insignia on the rear fuselage sides is almost invisible.



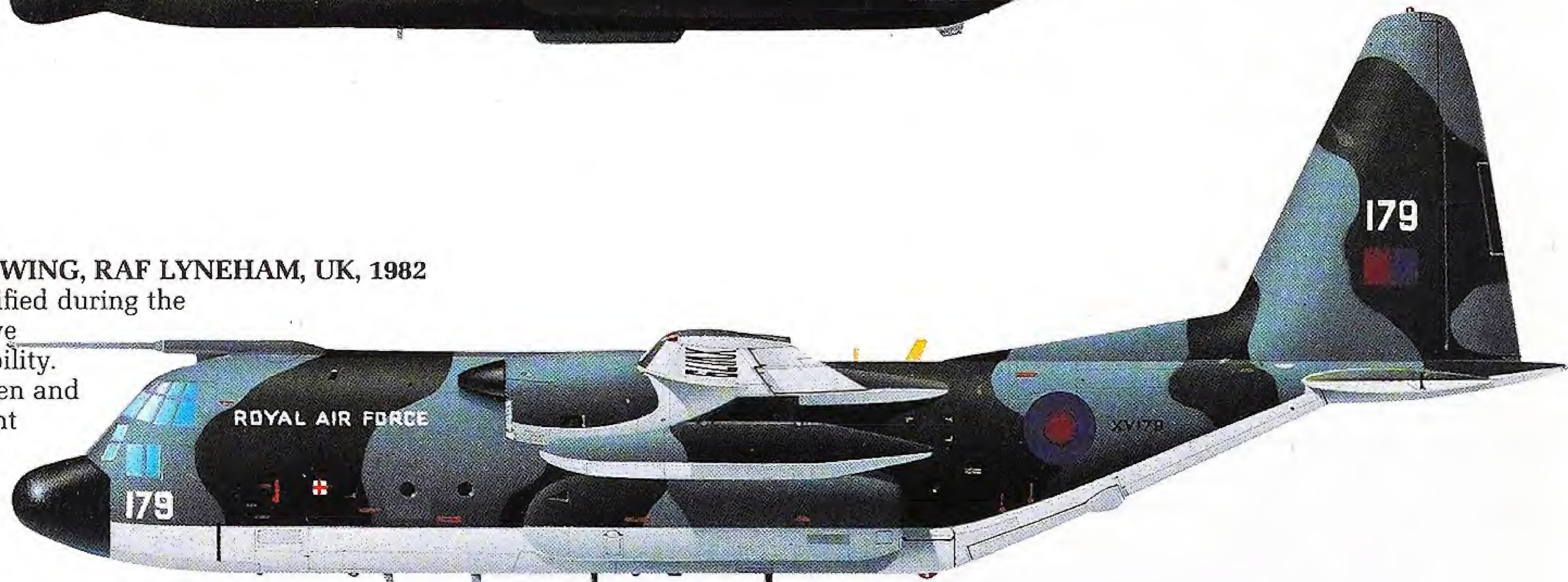
MC-130E, 8th SPECIAL OPERATIONS SQUADRON, 1st SOW, USA HURLBURT FIELD, USA, 1987

Another version of the "Lizard" scheme applied to an electronic reconnaissance version of the Hercules. These aircraft were also given a covering of matt black radar-absorbent paint on the undersides.



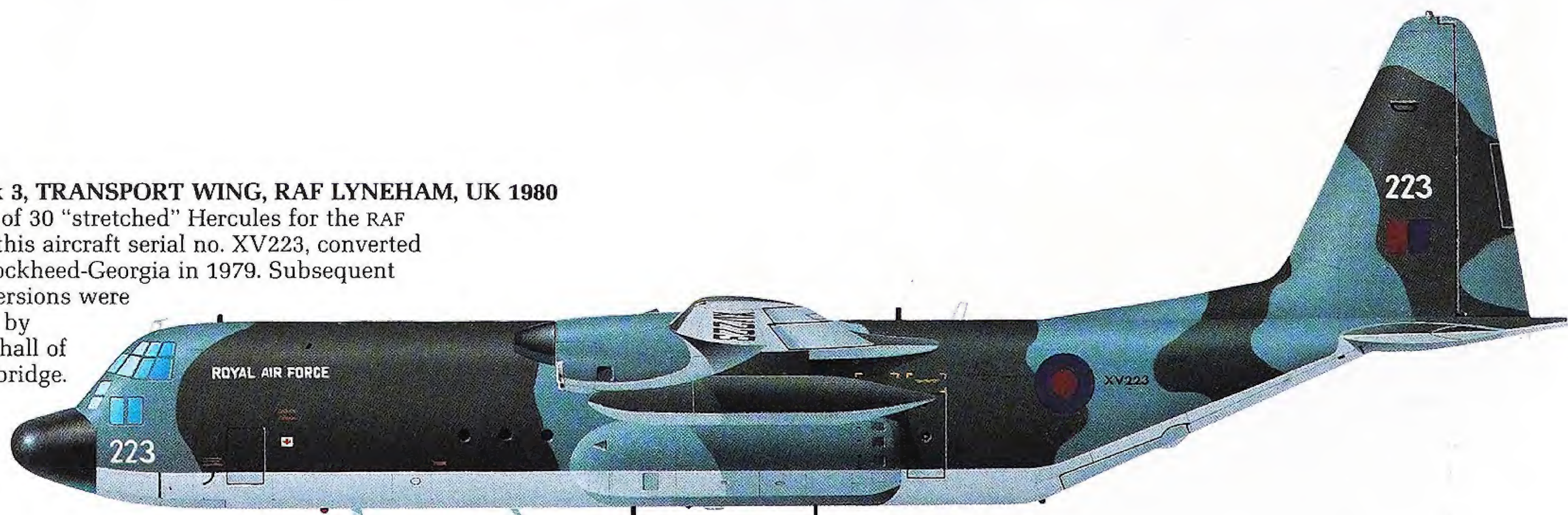
C Mk 1P, TRANSPORT WING, RAF LYNEHAM, UK, 1982

One of 16 Hercules modified during the Falklands conflict to have air-to-air refueling capability. The colors are Dark Green and Dark Sea Gray with Light Aircraft Gray undersides.



C Mk 3, TRANSPORT WING, RAF LYNEHAM, UK 1980

First of 30 "stretched" Hercules for the RAF was this aircraft serial no. XV223, converted by Lockheed-Georgia in 1979. Subsequent conversions were done by Marshall of Cambridge.



C-130H, 1 BRIGADA AEREA, ARGENTINE AIR FORCE, EL PALOMAR, ARGENTINA, 1986

TC-70 was the last of 10 Hercules delivered to the Fuerza Aerea Argentina between 1968 and 1979, of which the first three were E models and the other seven C-130Hs.



EC-130E (RR), 193rd SPECIAL OPERATIONS GROUP, US AIR NATIONAL GUARD, HARRISBURG, USA, 1987

One of the most unusual of US military operated Hercules are the electronic warfare versions used by this ANG unit. The dark color scheme is in keeping with the night combat role. Note the black outline insignia.



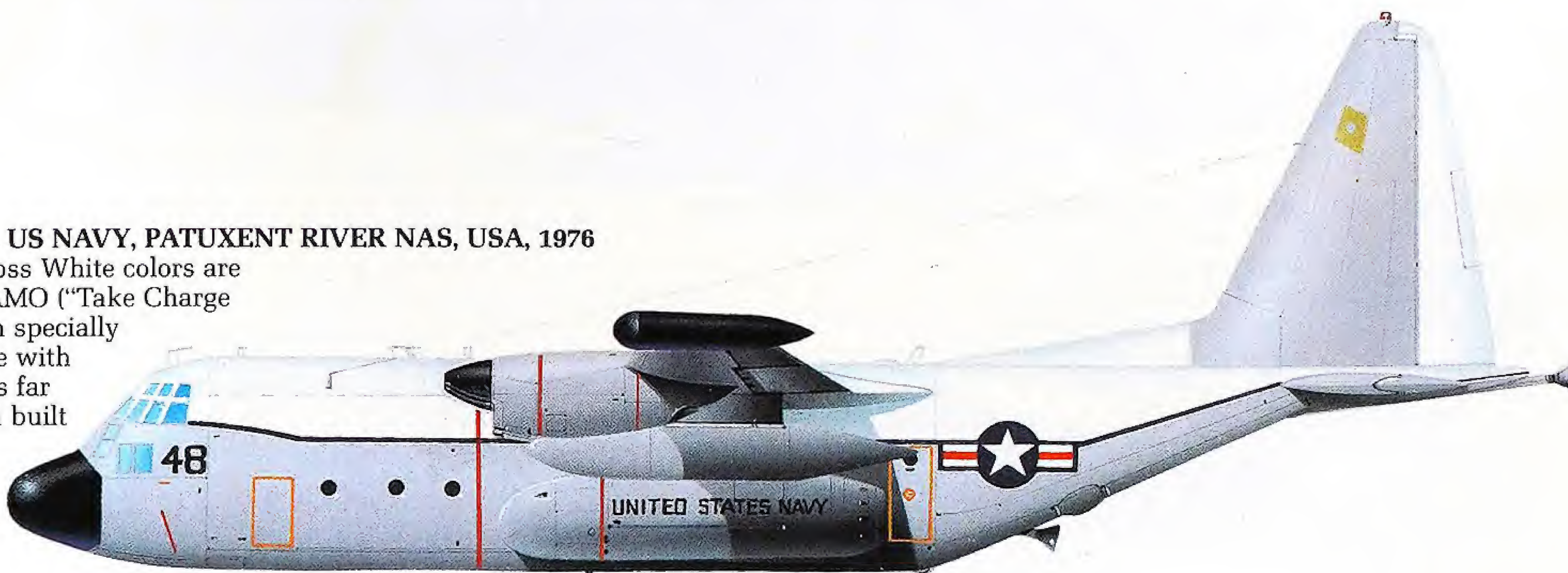
WC-130H, 53rd & 54th WEATHER RECON. SQUADRONS, USAF, KEESLER AFB, MS & ANDERSON AFB, GUAM, RESPECTIVELY, 1984

Gloss Gull Gray is used on this aircraft for weather reporting, including the penetration of tropical storms to obtain data for forecasting weather movements. The national marking is a 50in star and US AIR FORCE is in 20in high letters.



EC-130Q, VQ-3 & VQ-4, US NAVY, PATUXENT RIVER NAS, USA, 1976

Light Gull Gray and Gloss White colors are displayed on this TACAMO ("Take Charge And Move Out") version specially adapted to communicate with USN missile submarines far from base. 18 have been built so far.

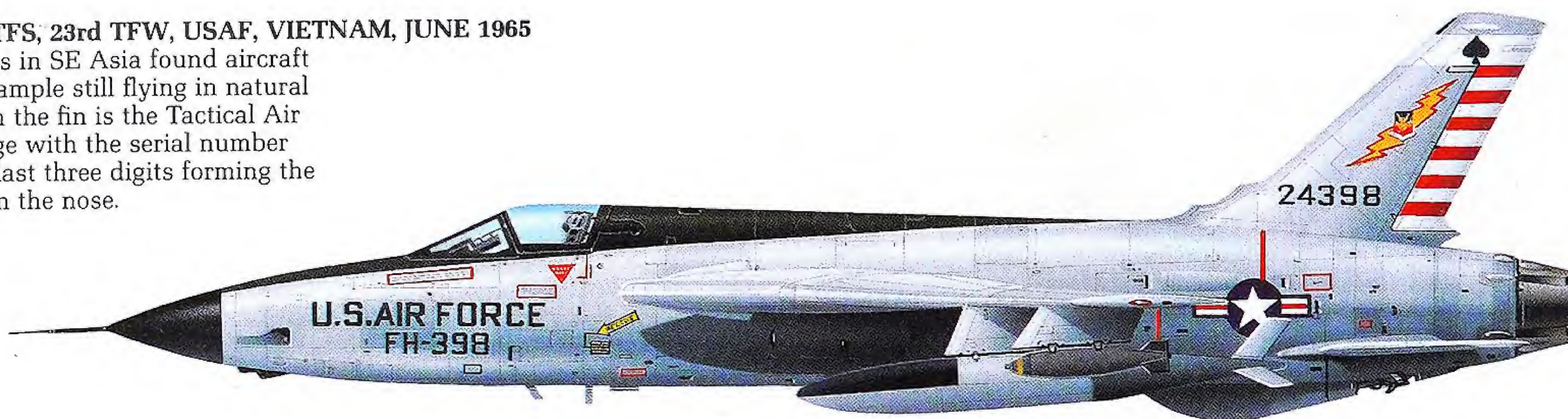


REPUBLIC F-105

Notable as being the largest single-seat, single-engined combat aircraft in history, the F-105 was designed to deliver nuclear or conventional weapons in all weathers at high speed and long range. It was never called upon to operate in the former role, but "the Thud" bore a major share of the bombing missions during the Vietnam war. The prototype made its first flight on 22 October 1955 and production followed of 75 Bs, 600 Ds and 143 two-seat Fs. The type was retired from USAF service in February 1984.

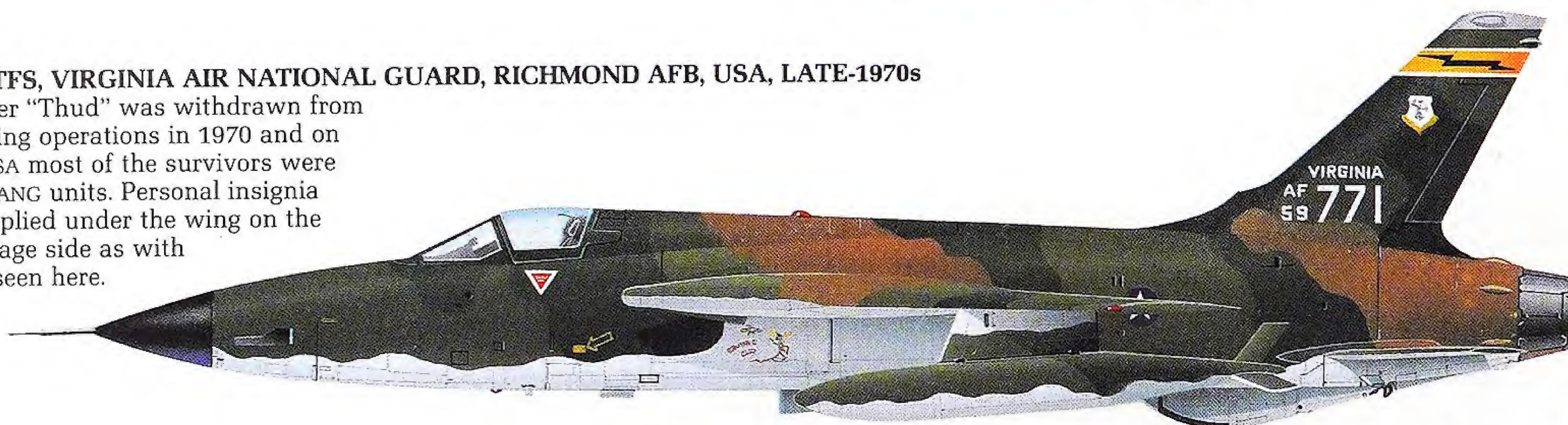
F-105D, 563rd TFS, 23rd TFW, USAF, VIETNAM, JUNE 1965

Early operations in SE Asia found aircraft such as this example still flying in natural metal finish. On the fin is the Tactical Air Command badge with the serial number below and the last three digits forming the buzz number on the nose.



F-105D, 149th TFS, VIRGINIA AIR NATIONAL GUARD, RICHMOND AFB, USA, LATE-1970s

The single-seater "Thud" was withdrawn from Vietnam bombing operations in 1970 and on return to the USA most of the survivors were spread among ANG units. Personal insignia was usually applied under the wing on the light gray fuselage side as with "Satanic duo" seen here.



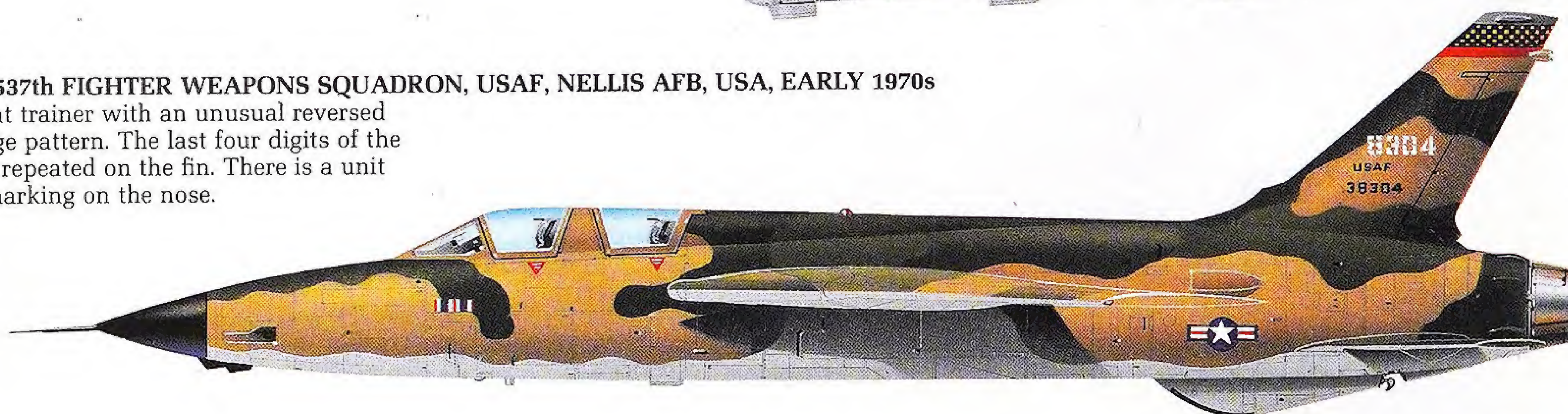
F-105D, 563rd TFS, 23rd TFW, USAF, McCONNELL AFB, USA, MAY 1972

The built-up dorsal spine shows 61-0047 as one of 30 aircraft fitted with Thunderstick II fire control systems, with added Doppler and Loran navigation aids. Under the fuselage is a multiple ejector rack for bombs.



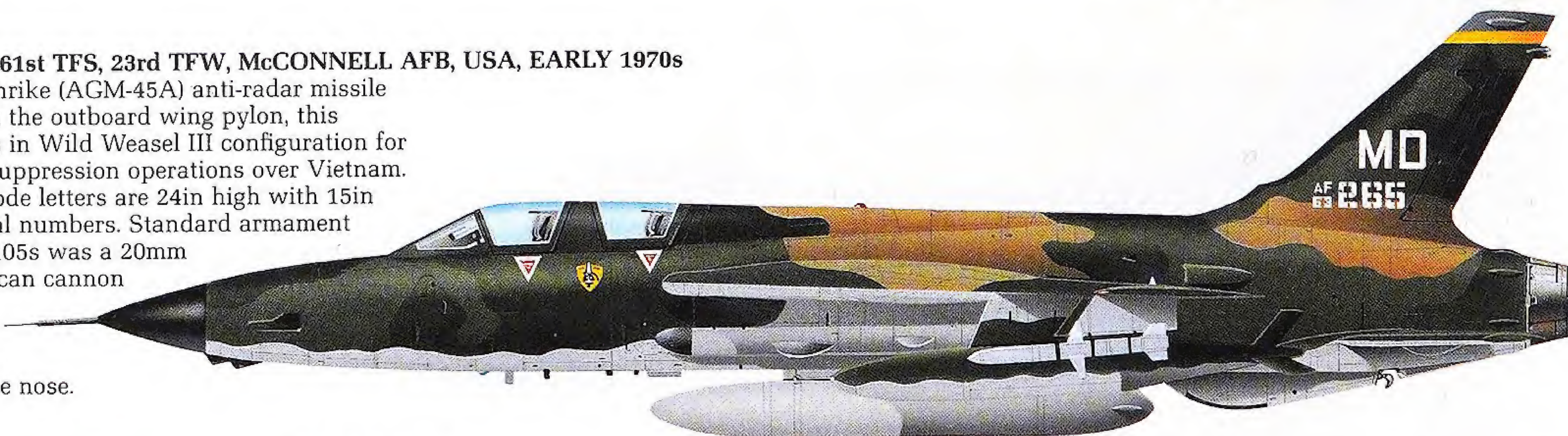
F-105F, 4537th FIGHTER WEAPONS SQUADRON, USAF, NELLIS AFB, USA, EARLY 1970s

A two seat trainer with an unusual reversed camouflage pattern. The last four digits of the serial are repeated on the fin. There is a unit citation marking on the nose.



F-105G, 561st TFS, 23rd TFW, McCONNELL AFB, USA, EARLY 1970s

With a Shrike (AGM-45A) anti-radar missile visible on the outboard wing pylon, this "Thud" is in Wild Weasel III configuration for defense suppression operations over Vietnam. The fin code letters are 24in high with 15in high serial numbers. Standard armament for all F-105s was a 20mm M-61 Vulcan cannon located in the left-hand side of the nose.

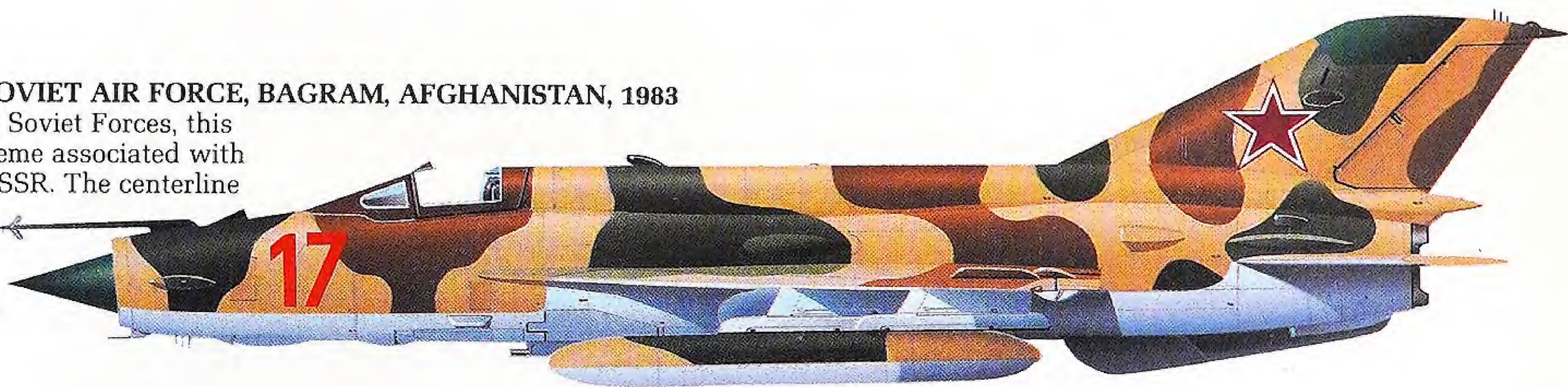


MIKOYAN- GUREVICH MiG-21

During the Seventies, the MiG-21 delta-winged interceptor was the most widely used combat aircraft in the world, and at least 38 countries were equipped with the type. The prototype flew in 1955 and the F version was the first practical example to enter widespread use. Extending the aircraft's role to that of a fighter-bomber resulted in the MiG-21PFMA which was made in huge numbers and had an enlarged spine housing extra equipment. Among the 10,000 + MiG-21s built, were recce and trainer versions.

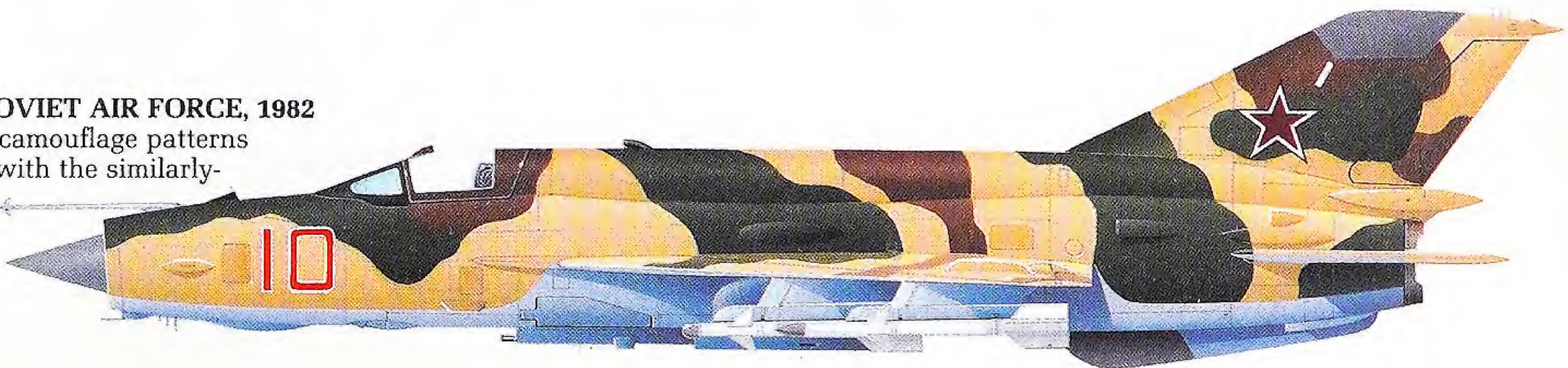
MiG-21MF (FISHBED J), SOVIET AIR FORCE, BAGRAM, AFGHANISTAN, 1983

Detached to the occupying Soviet Forces, this aircraft carries a color scheme associated with the southern area of the USSR. The centerline GSh-23L cannon can just be seen behind the 108 Imp gal (490lit) drop tank on the inboard pylon.



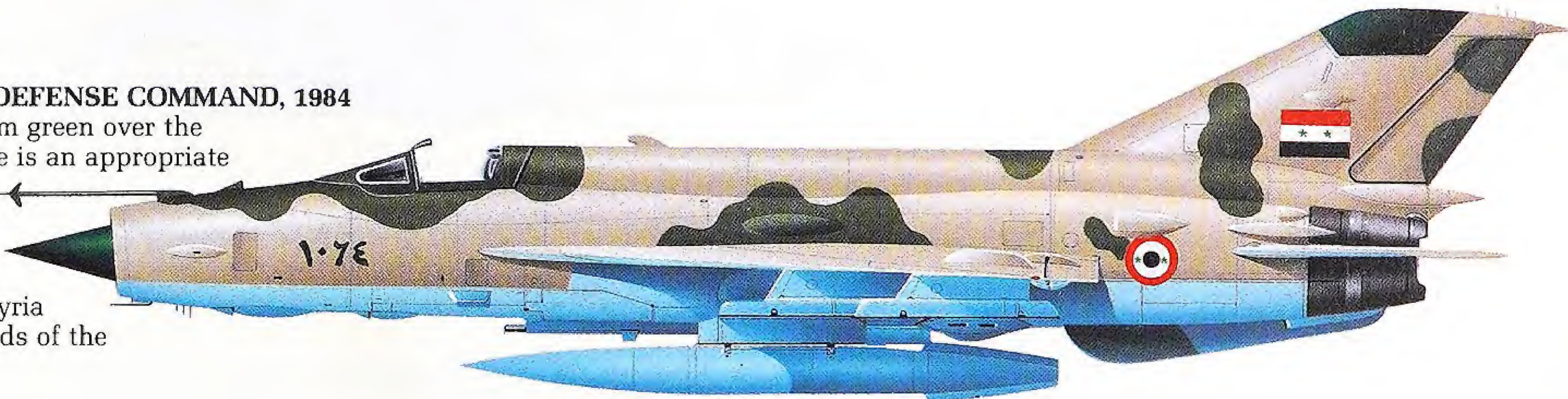
MiG-21MF (FISHBED J), SOVIET AIR FORCE, 1982

Very few Soviet Air Force camouflage patterns are identical. If compared with the similarly-colored aircraft above, even the size of the red star is different. Under the wing are Advanced Atoll air-to-air missiles.



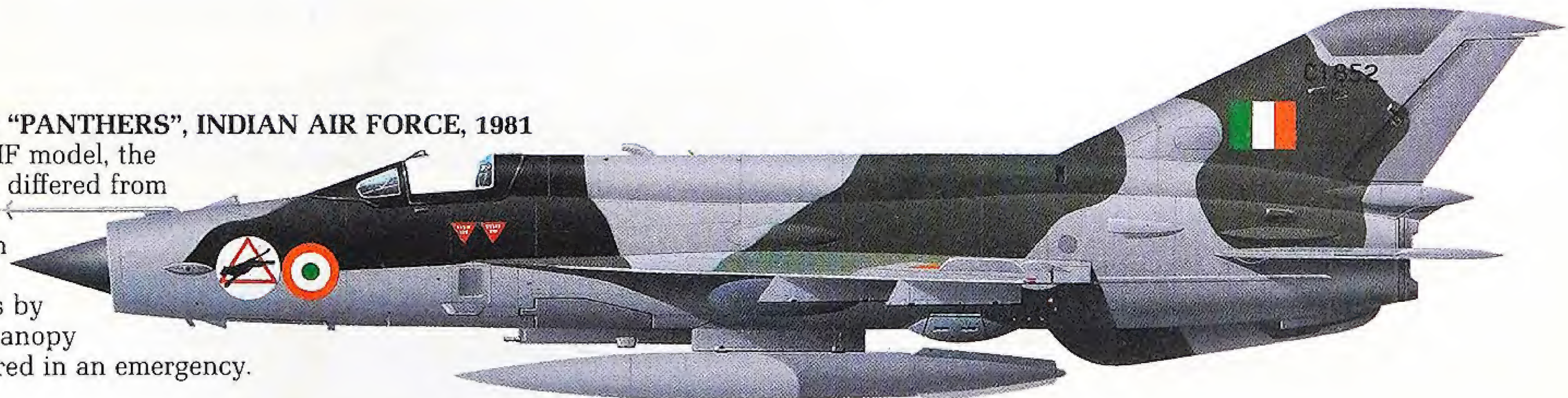
MiG-21MF, SYRIAN AIR DEFENSE COMMAND, 1984

Random patches of medium green over the sand-colored upper surface is an appropriate finish for this desert-based Fishbed. In spite of a numerical advantage over the neighbouring Israeli AF, Syria has fared badly at the hands of the skilled Jewish pilots.



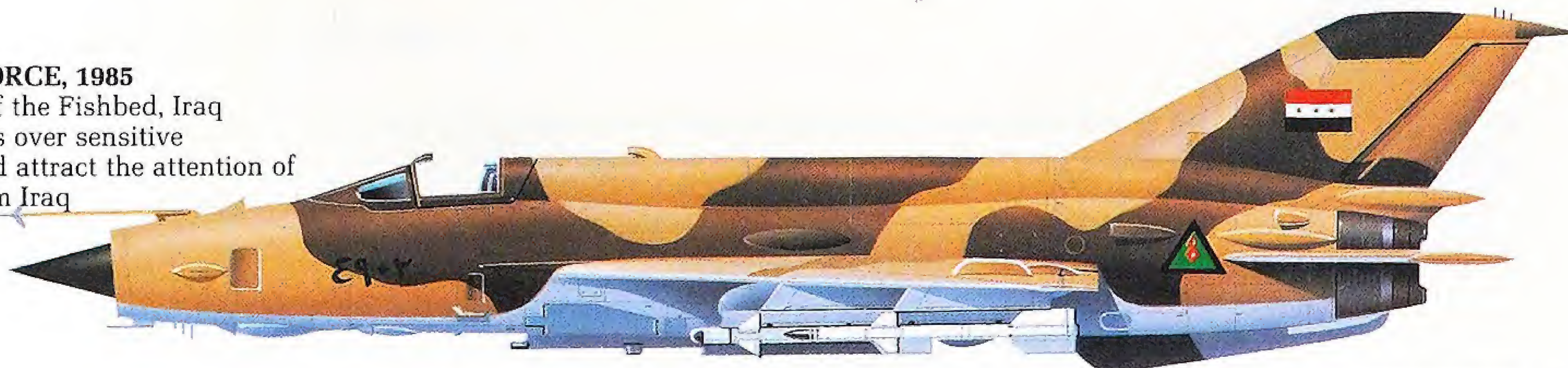
MiG-21M, 37 SQUADRON "PANTHERS", INDIAN AIR FORCE, 1981

Externally similar to the MF model, the Hindustan-built M version differed from retaining the earlier Tumanskii R-11 engine. On the nose is the unit badge while the two red triangles by the cockpit indicate both canopy and ejection seat can be fired in an emergency.



MiG-21MF, IRAQI AIR FORCE, 1985

Another desert operator of the Fishbed, Iraq used the type to fly patrols over sensitive military bases which could attract the attention of the Iranian AF, with whom Iraq was at war. The latest MiG-29 Fulcrum is now in service with the Iraqi AF.

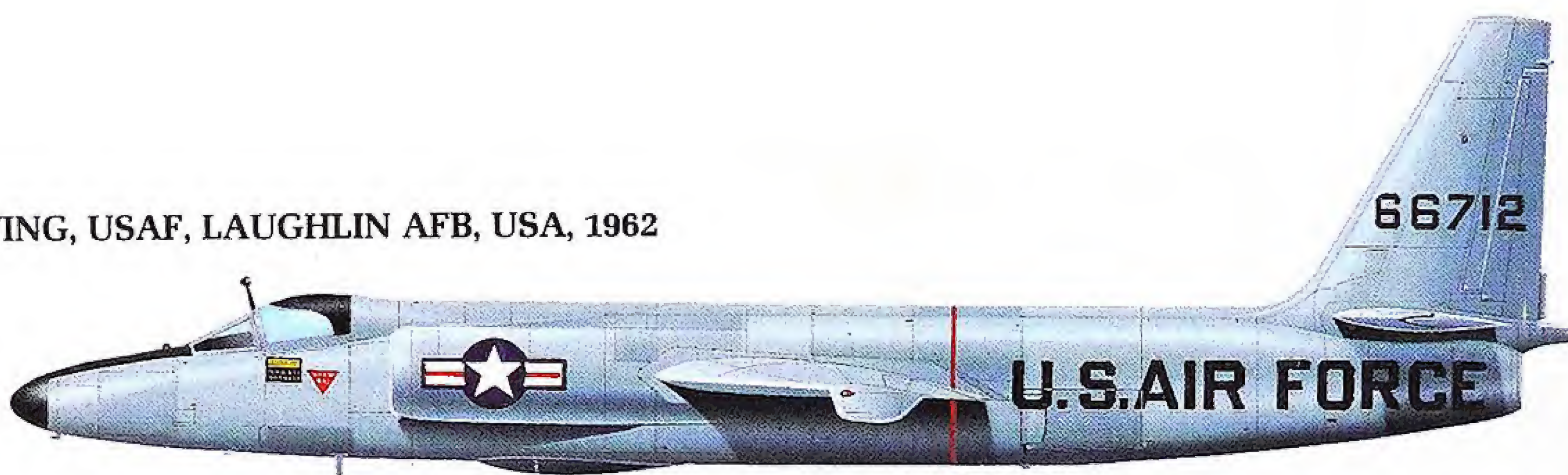


LOCKHEED U-2

Designed and built in secrecy under the code name Aquatone, Lockheed's U-2 was a high-altitude reconnaissance aircraft intended to monitor Soviet military and strategic progress. In May 1960, one was shot down over Russia and the aircraft's true purpose was publicly revealed. Variants included the U-2A, U-2B, U-2C, U-2D and then the later U-2R. Production was approximately 113 aircraft.

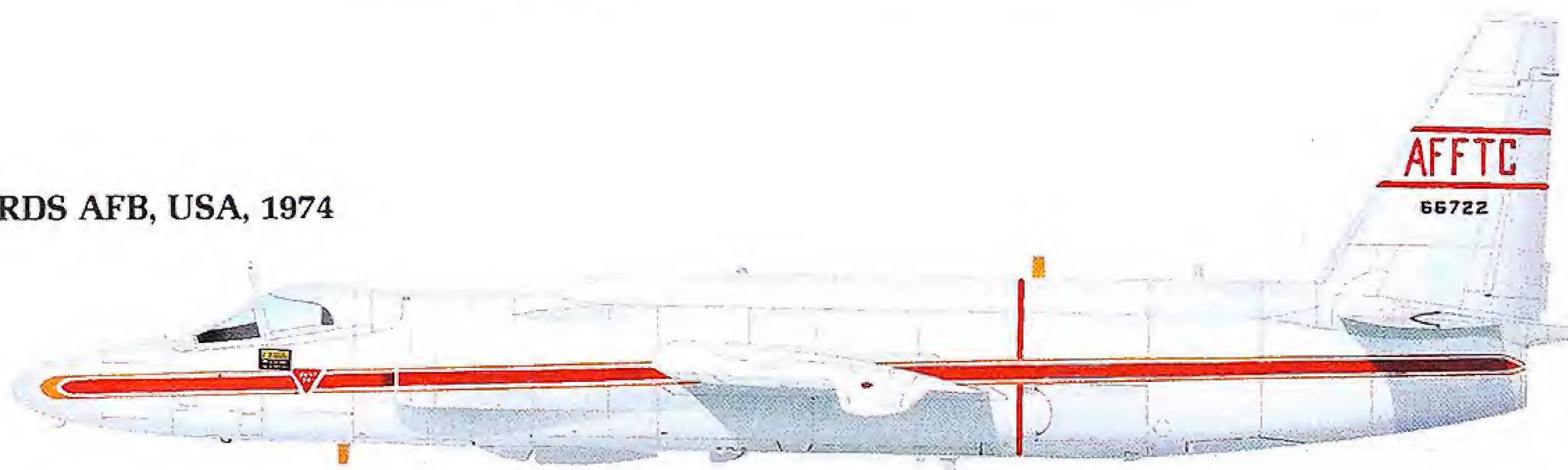
U-2A, 4080th STRATEGIC RECONNAISSANCE WING, USAF, LAUGHLIN AFB, USA, 1962

Depicted here in a natural metal overall finish is an aircraft used during the 1962 Cuban missile crisis and later deployed to RAF Upper Heyford, UK. The national insignia was painted above port and below starboard wings only.



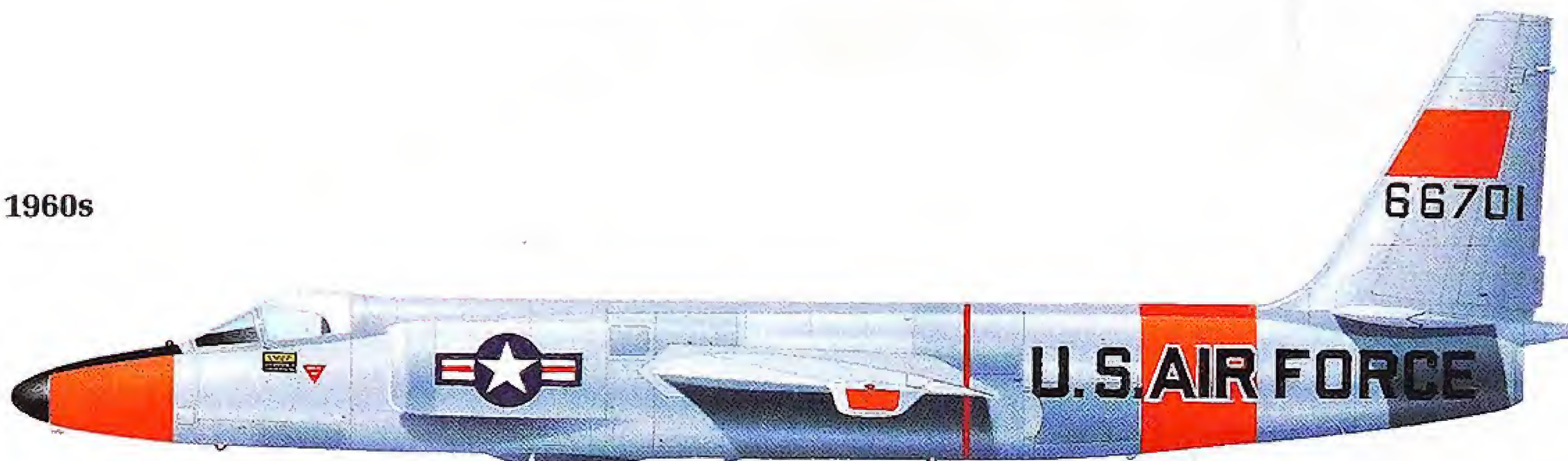
U-2D, AIR FORCE FLIGHT TEST CENTER, EDWARDS AFB, USA, 1974

A gloss white and red color scheme was carried during the aircraft's final period as a test vehicle for various research programs. It is now in the USAF Museum at Wright-Patterson AFB, Ohio.



U-2A, US AIR FORCE, EDWARDS AFB, USA, MID 1960s

As well as the natural metal finish displayed here, this aircraft also flew with Strategic Air Command in an all-black finish and in Europe in a two-tone gray scheme. It is now in the SAC Museum, Offutt AFB, Omaha.



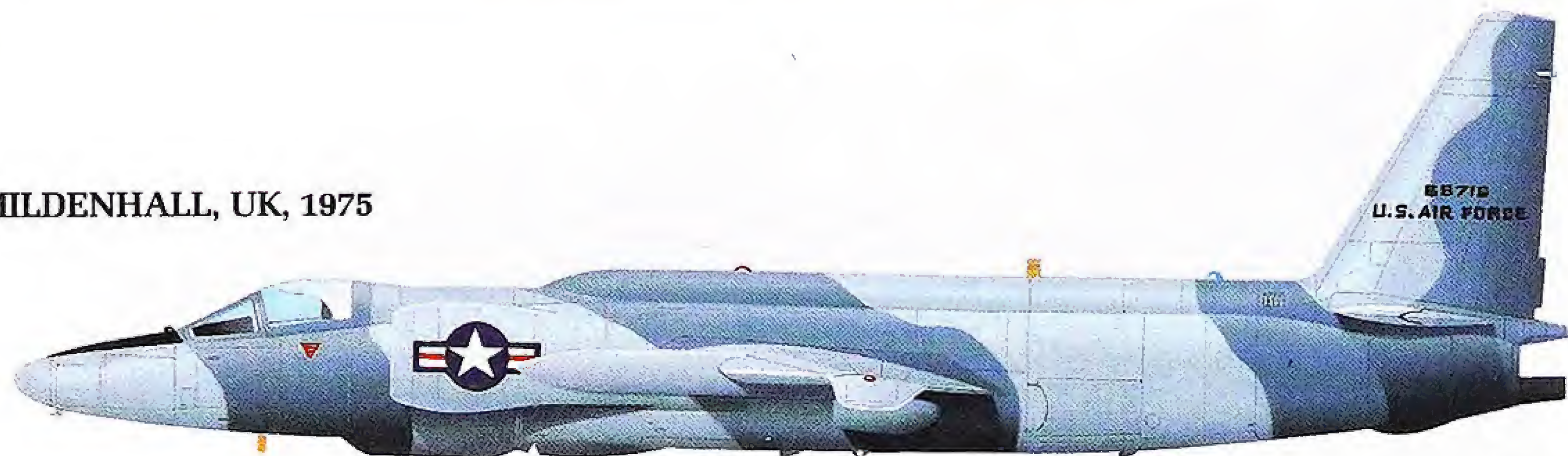
U-2CT, 100th STRATEGIC RECONNAISSANCE WING, DAVIS-MONTHAN AFB, USA, 1975

Built initially as a U-2D and operated by the 4080th SRW, 56-6953 was later converted into this trainer configuration and used by the 100th and 9th SRWs.



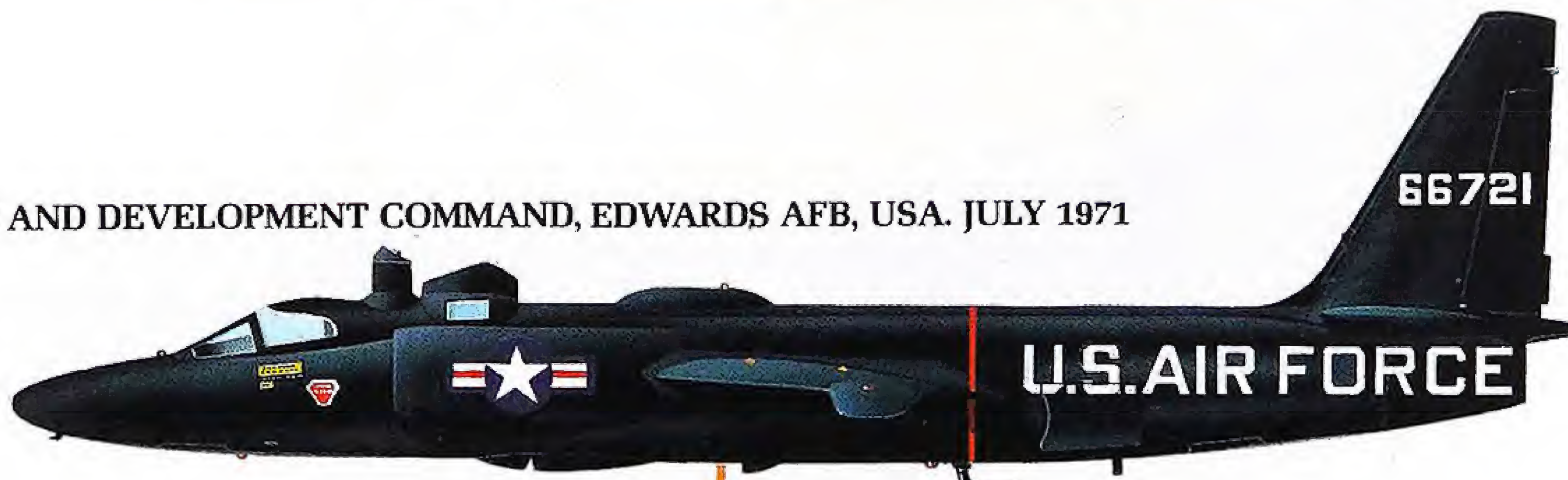
U-2C, 4080th STRATEGIC RECON. WING, RAF MILDENHALL, UK, 1975

One of six deployed to Europe to test a target location system developed to find Warsaw Pact emitters behind the Iron Curtain. The two-tone gray "Sabre Scheme" replaced black at request of the UK Government.



U-2D, 651st TEST GROUP, USAF AIR RESEARCH AND DEVELOPMENT COMMAND, EDWARDS AFB, USA, JULY 1971

Built as a U-2A, this machine was used to test new equipment following its change to U-2D standard. Painted in non-reflective black, it has an unusual vertical sensor behind the cockpit.



CONVAIR F-102

Intended for supersonic bomber intercepts, this delta-winged fighter nearly didn't make it into production when it was realized that it couldn't reach the speed of sound (Mach 1) in level flight. Aerodynamic reshaping of the fuselage was hurriedly done and the famous "Coke-bottle curve" reduced the drag and the "Deuce" was at last on its way. Nearly three years after the first flight, the F-102A entered service with Air Defense Command in April 1956. Production reached 889, plus 111 two-seaters.

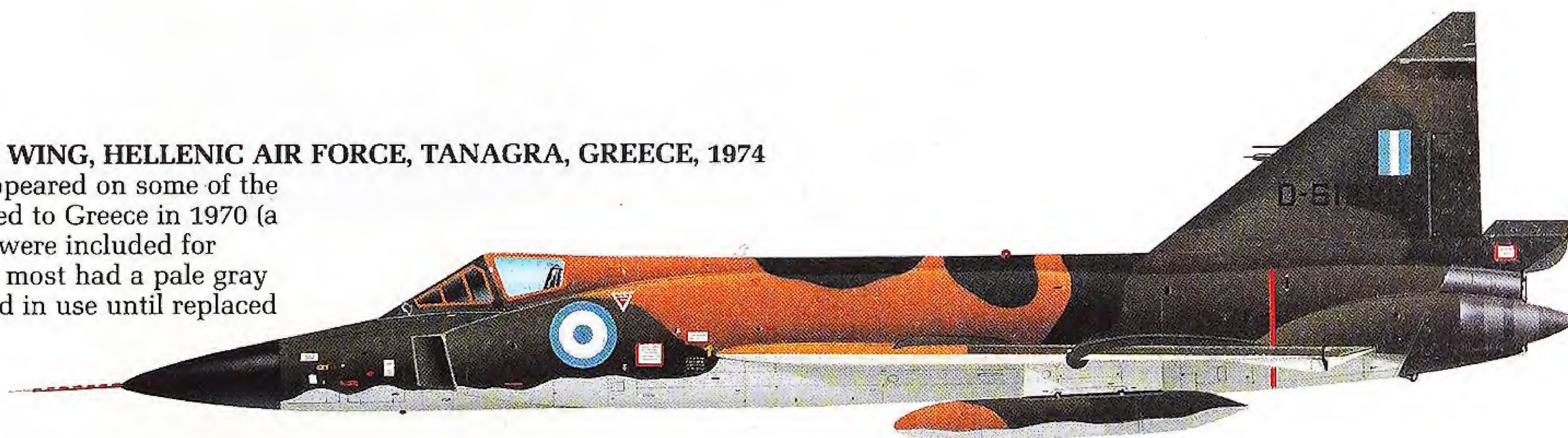
F-102A, 57th FIGHTER INTERCEPTOR SQUADRON, US AIR FORCE, KEFLAVIK, ICELAND, MID 1960s

The "Black Knights" in Iceland was the last unit to fly this Century-series fighter, finally retiring it in 1973. Red Arctic markings were applied to the fin and wings, a 30in star marking was painted on the engine intake, the "U.S. AIR FORCE" was 21in high, and fin serial numbers were 12in high.



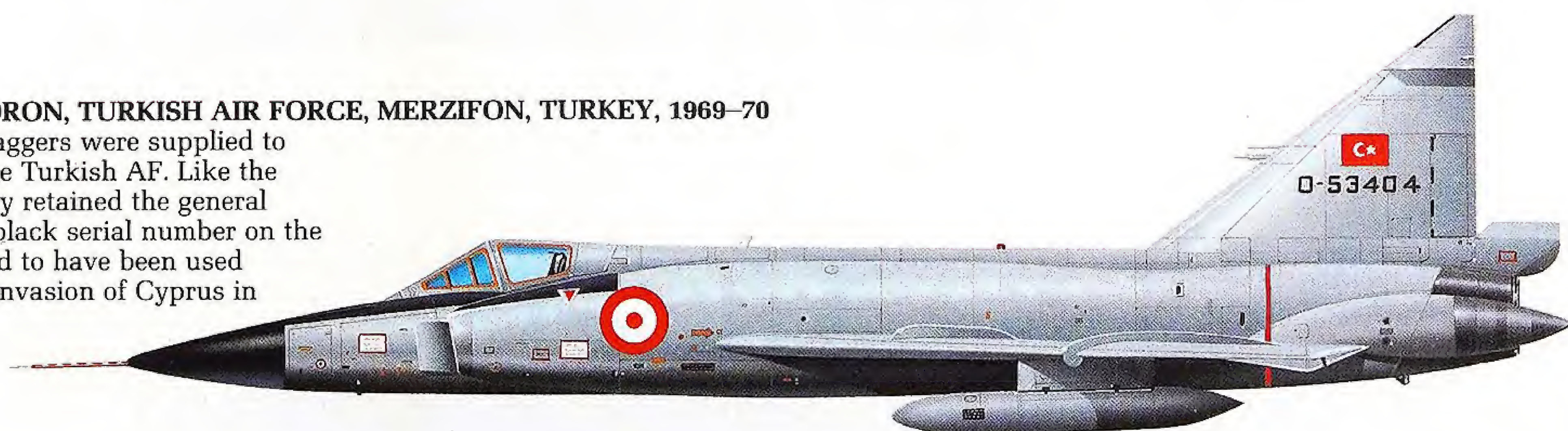
F-102A, 342 MIRA, 114 WING, HELLENIC AIR FORCE, TANAGRA, GREECE, 1974

Vietnam camouflage appeared on some of the 24 or so aircraft supplied to Greece in 1970 (a number of two-seaters were included for training use). However, most had a pale gray finish and were retained in use until replaced by Mirage F.1CGs.



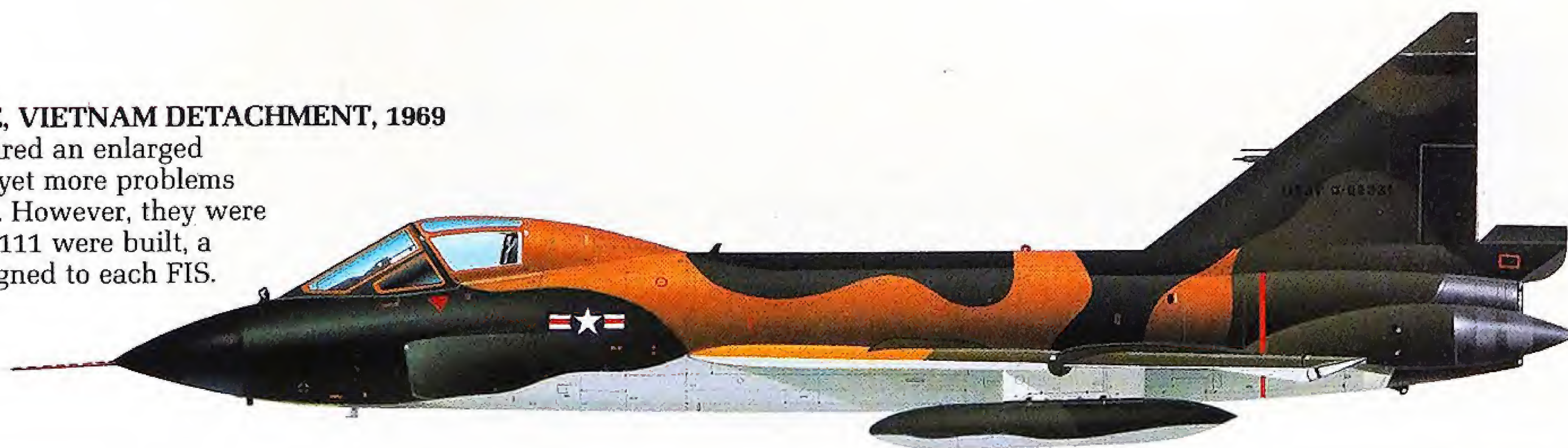
F-102A, 181 SQUADRON, TURKISH AIR FORCE, MERZIFON, TURKEY, 1969-70

About 50 surplus Daggers were supplied to two squadrons of the Turkish AF. Like the Greek machines, they retained the general gray finish and the black serial number on the fin. They are believed to have been used during the Turkish invasion of Cyprus in 1974.



TF-102A, US AIR FORCE, VIETNAM DETACHMENT, 1969

Side-by-side seating required an enlarged forward fuselage, posing yet more problems for the Convair designers. However, they were eventually overcome and 111 were built, a couple usually being assigned to each FIS.

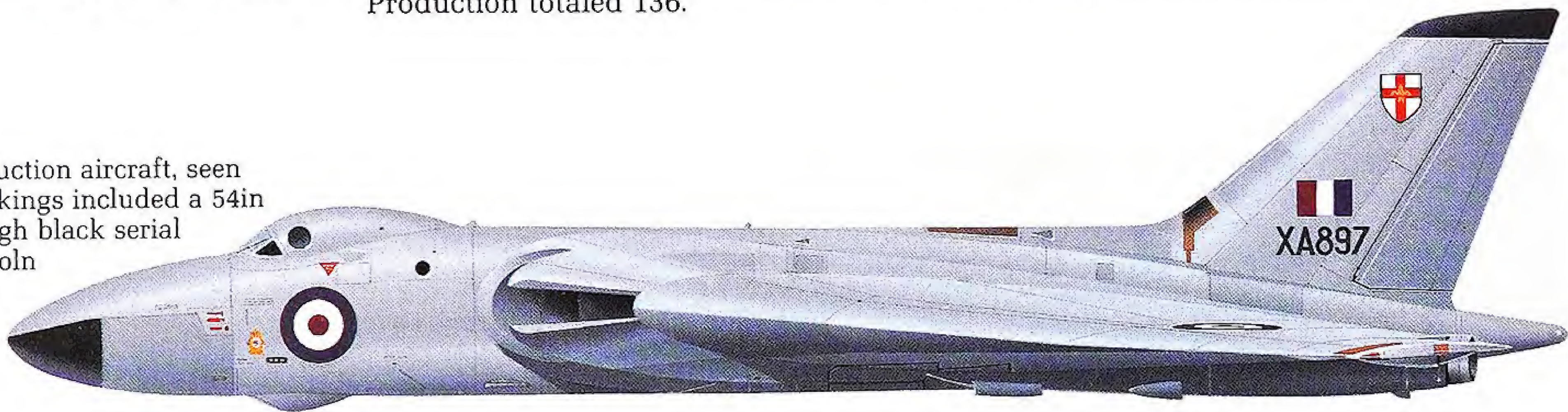


AVRO VULCAN

In the hands of a skilled pilot, the Avro Vulcan could achieve a level of manouverability that was almost unequalled by any other large four-jet strategic bomber and at one Farnborough Air Display test pilot Roly Falk rolled the aircraft to prove its capability. The prototype Vulcan flew in August 1952 and the type was developed through the B1 and B2, the latter being used to attack the Argentine-held Falkland Islands in 1982. It was withdrawn from RAF service in March 1984. Production totaled 136.

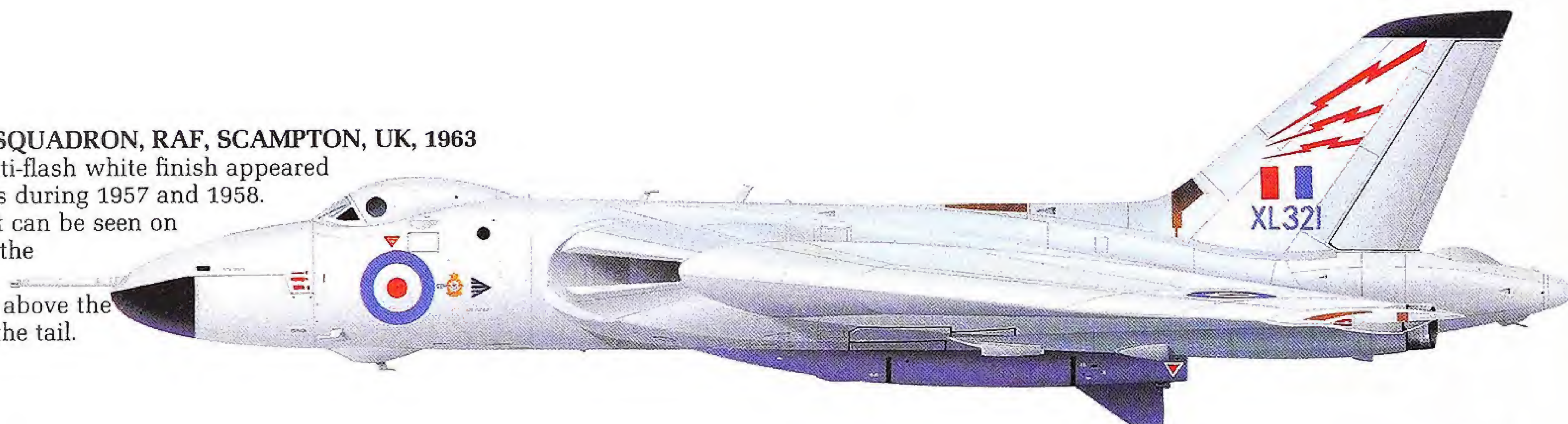
B Mk 1, RAF, 1955

This was the ninth production aircraft, seen here in silver finish. Markings included a 54in fuselage roundel, 18in high black serial number and City of Lincoln shield. This aircraft crashed on its return from New Zealand in October 1956.



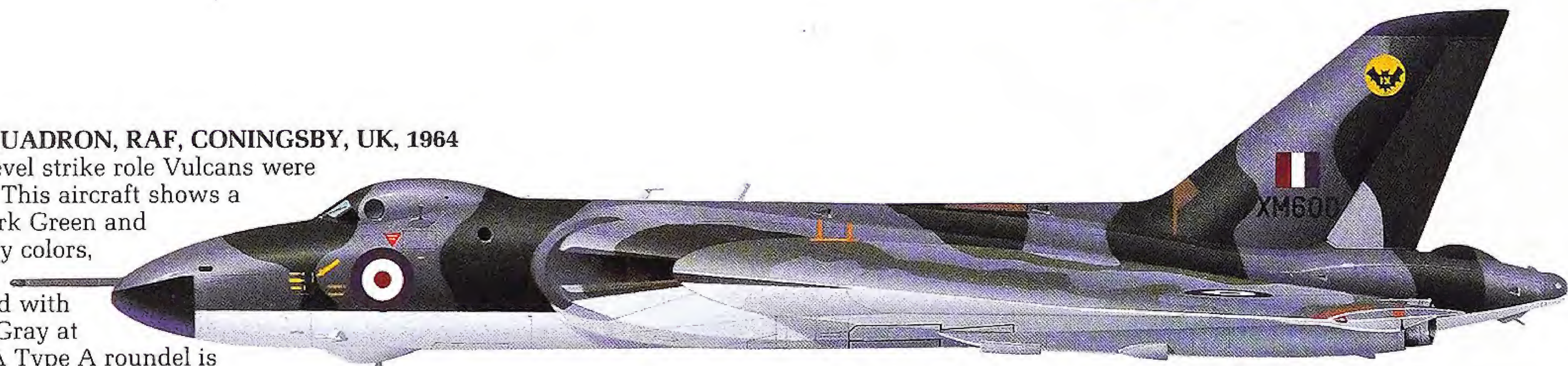
B Mk II, 617 SQUADRON, RAF, SCAMPTON, UK, 1963

An overall anti-flash white finish appeared on V bombers during 1957 and 1958. The unit crest can be seen on the nose and the squadron markings are above the RAF flash on the tail.



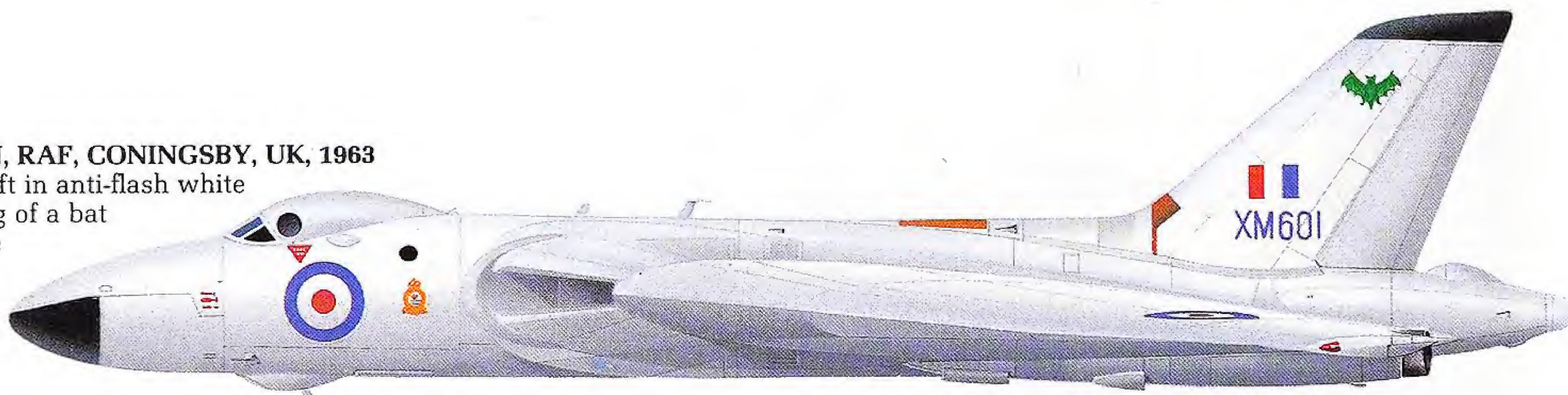
B Mk II, 9 SQUADRON, RAF, CONINGSBY, UK, 1964

For the low level strike role Vulcans were camouflaged. This aircraft shows a scheme of Dark Green and Dark Sea Gray colors, the latter being replaced with Medium Sea Gray at a later date. A Type A roundel is on the nose.



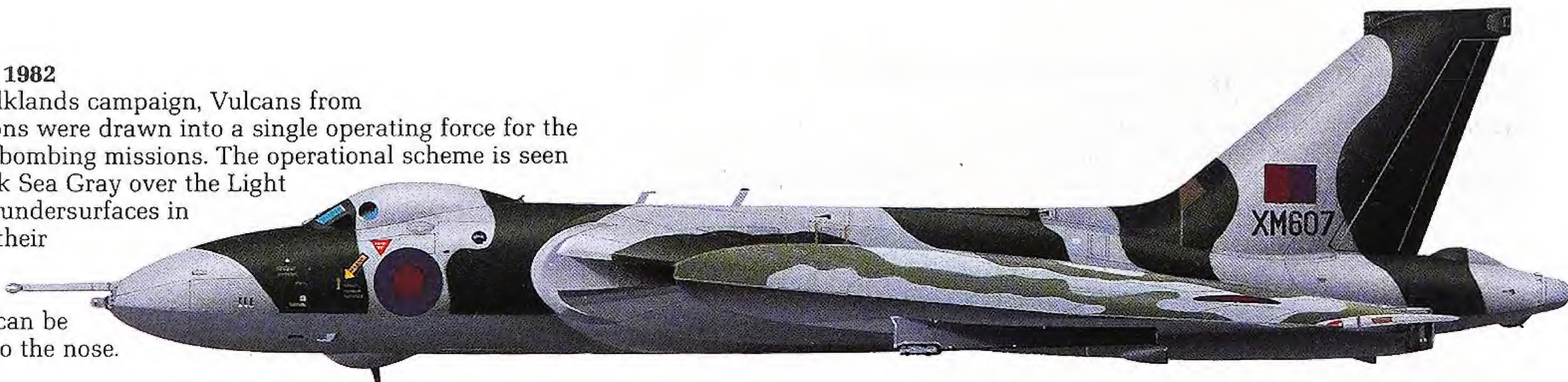
B Mk II, 9 SQUADRON, RAF, CONINGSBY, UK, 1963

This 9 Squadron aircraft in anti-flash white shows the unit marking of a bat high on the tail and the crest on the nose. The bulged tail cone housed powerful electronic counter-measures (ECM) equipment.



B Mk II, RAF, 1982

During the Falklands campaign, Vulcans from many squadrons were drawn into a single operating force for the "Black Buck" bombing missions. The operational scheme is seen here with Dark Sea Gray over the Light Aircraft Gray undersurfaces in keeping with their nocturnal flights. Three raid symbols can be seen applied to the nose.

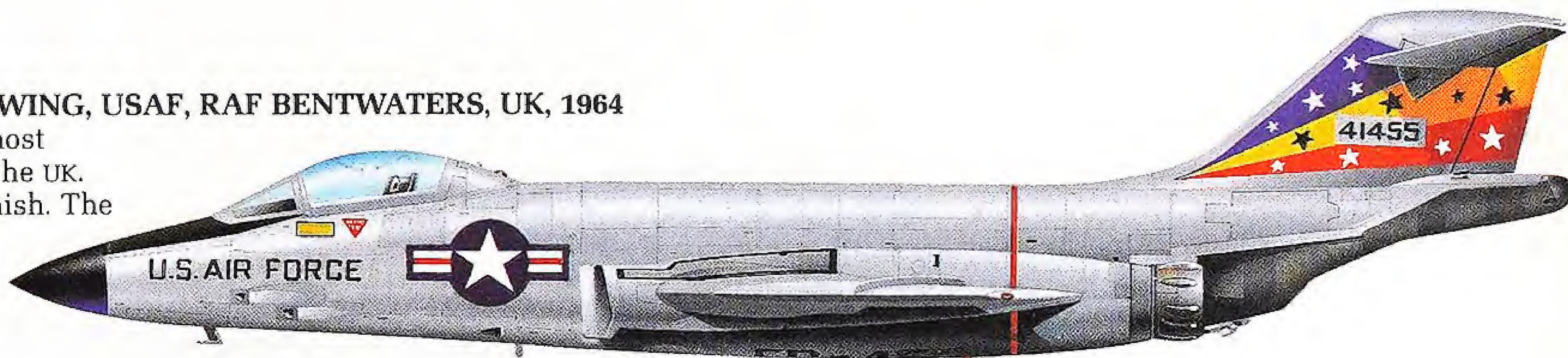


MCDONNELL F-101 VOODOO

A large, heavy aircraft due to its original design concept as a long-range escort and penetration fighter, the first Voodoo flew on 29 September 1954 and the F-101A entered USAF service three years later. Versions included the F-101C low-level fighter-bomber, RF-101C unarmed reconnaissance model which served with distinction in Vietnam until supplanted by the RF-4C Phantom, and the F-101B two-seat interceptor armed with Genie nuclear missiles. Canada and Taiwan were the only other Voodoo operators outside the USA. Production exceeded 730 aircraft.

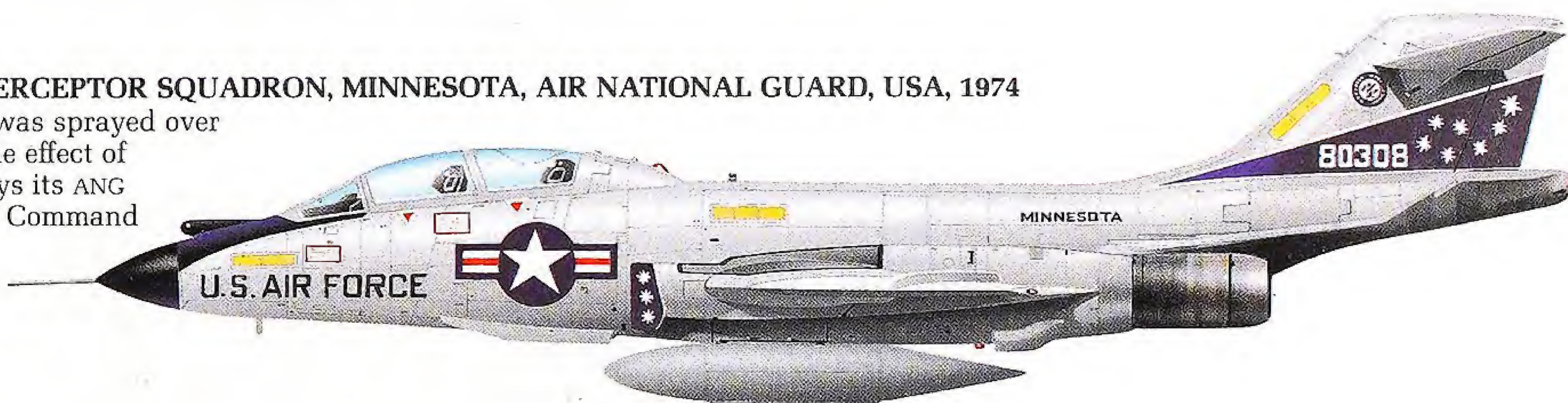
F-101A, 81st TACTICAL FIGHTER WING, USAF, RAF BENTWATERS, UK, 1964

Only 77 of this version were built, most serving with the 81st TFW based in the UK. This aircraft is in a natural metal finish. The "buzz" number under the fuselage (FB-455) appeared on each side.



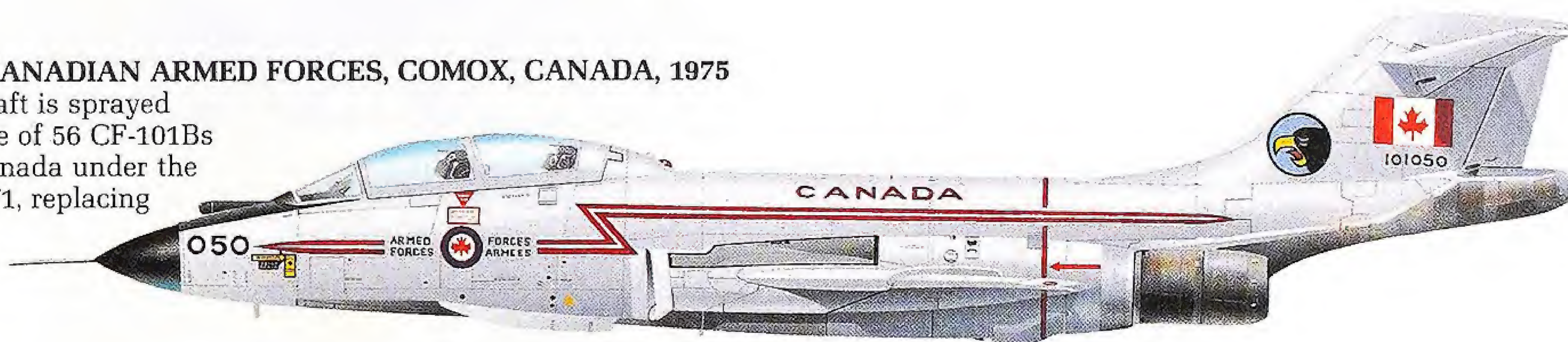
F-101B, 179th FIGHTER INTERCEPTOR SQUADRON, MINNESOTA, AIR NATIONAL GUARD, USA, 1974

A protective light gray paint was sprayed over the natural metal to reduce the effect of corrosion. This F-101B displays its ANG operator insignia and has the Command badge on the fin.



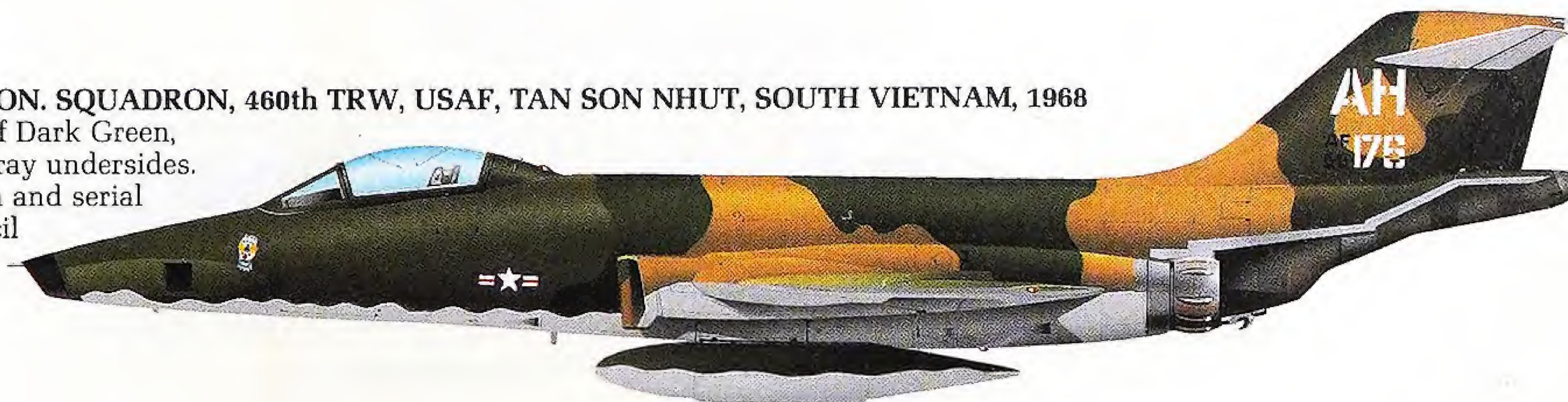
CF-101B, 409 SQUADRON, CANADIAN ARMED FORCES, COMOX, CANADA, 1975

This Air Defense Group aircraft is sprayed overall a light gray. It was one of 56 CF-101Bs and 10, 101Fs delivered to Canada under the Peace Wings operation in 1971, replacing an earlier batch of the same quantity.



RF-101C, 45th TACTICAL RECON. SQUADRON, 460th TRW, USAF, TAN SON NHUT, SOUTH VIETNAM, 1968

Standard SE Asia camouflage of Dark Green, Medium Green and Tan with Gray undersides. The White tail code is 24in high and serial number 15in high, both in stencil style lettering.



RF-101C, CHINESE NATIONALIST AIR FORCE, TAIWAN, MID-1960s

One of about eight supplied by the USA for reconnaissance missions over mainland Communist China. Each point of the national insignia represents a two-hour period of the Chinese day.

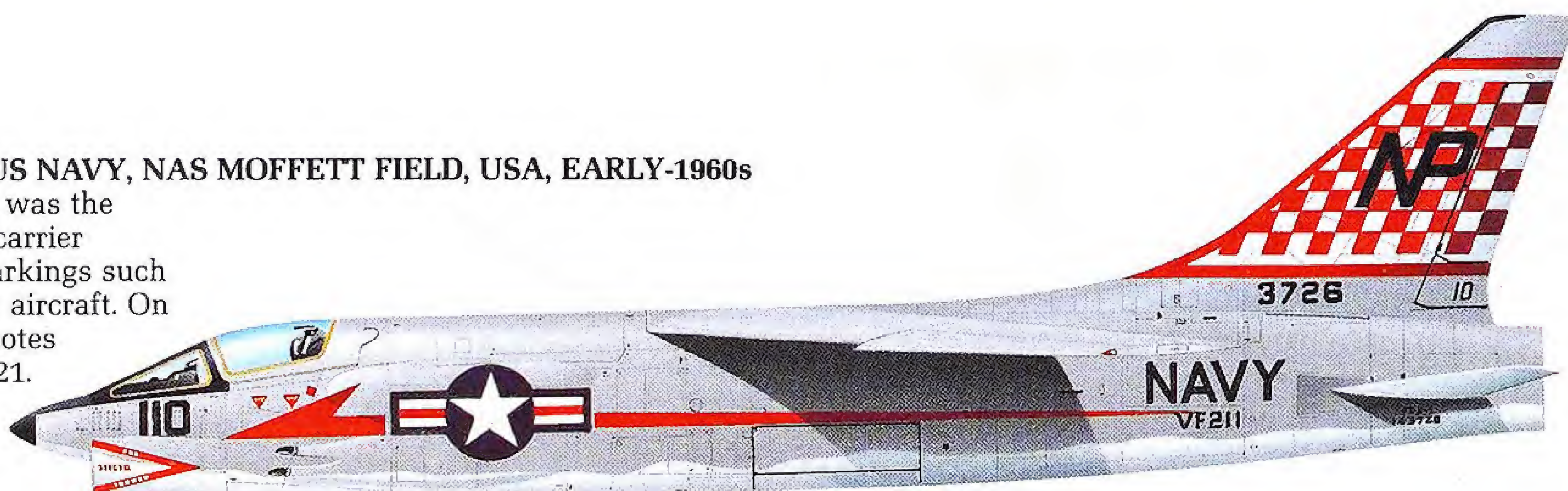


CHANCE-VOUGHT F-8 CRUSADER

To give the pilot better visibility over the nose, Chance Vought designers gave the Crusader a variable-incidence high wing so that when landing and taking off the fuselage remained level while the wing is in a raised position to give a greater angle of attack and thus greater lift. The Crusader could also sustain Mach 1 in level flight, the first shipboard service fighter to do so. France and the Philippines were overseas users, but most of the 1261 built were flown by the USN and Marine Corps.

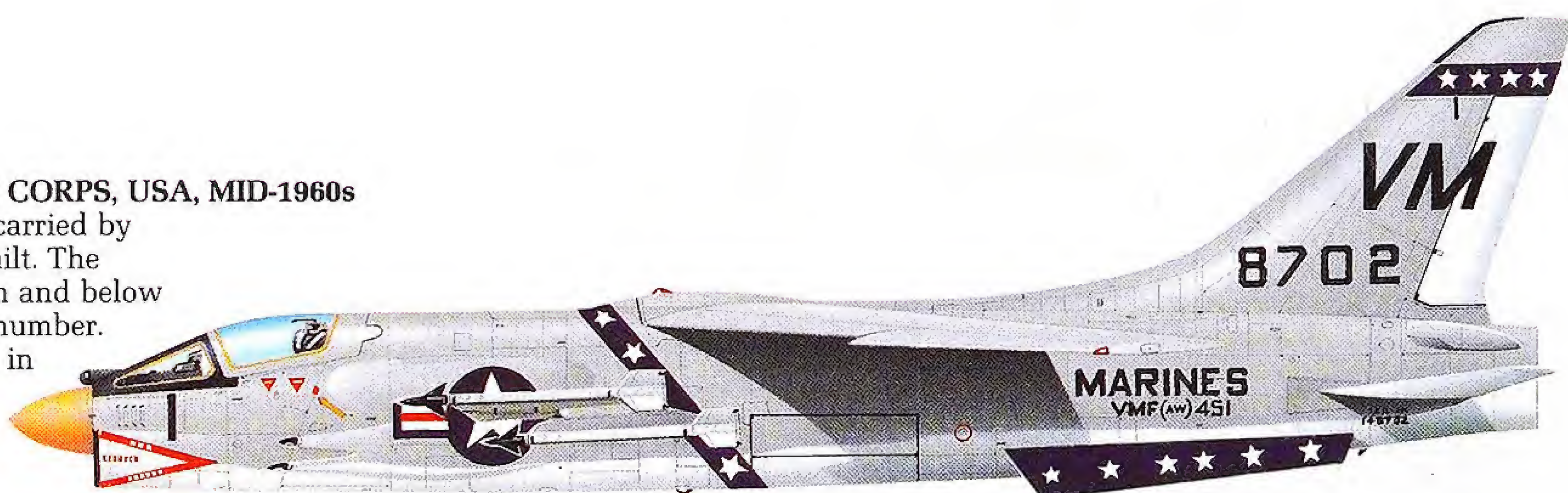
F-8A, VF-211 "CHECKMATES", US NAVY, NAS MOFFETT FIELD, USA, EARLY-1960s

Light Gull Gray and Gloss White was the basic color scheme for US-based carrier aircraft for many years. Bright markings such as these were typical of squadron aircraft. On this machine the NP tail code denotes attachment to Carrier Air Group 21.



F-8D, VMF(AW)-451, US MARINE CORPS, USA, MID-1960s

Four Sidewinder AAMs could be carried by this version, of which 152 were built. The squadron code is carried on the fin and below it is a larger than standard serial number. Before designations were changed in the Sixties this version was known as an F8U-2N.



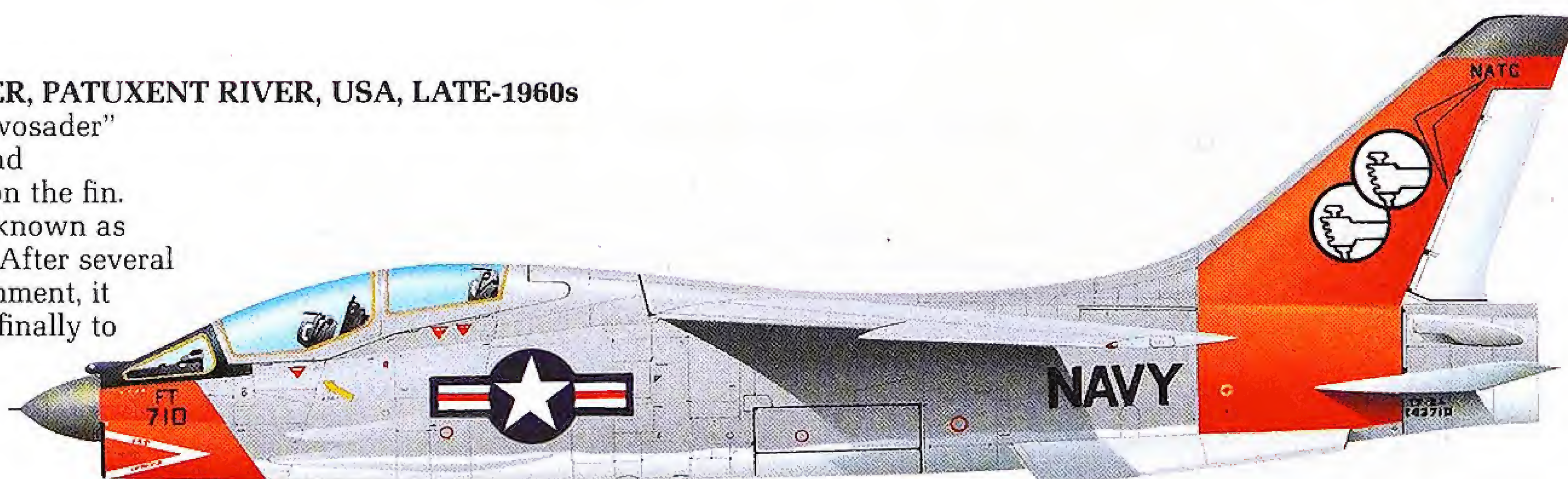
RF-8G, VFP-306, US NAVY RESERVE, NARTU, WASHINGTON DC, USA

This smart example is a remanufactured RF-8A with a camera bay in the forward fuselage. The RF-8 Crusader was the primary naval reconnaissance aircraft throughout the Vietnam War.



TF-8A, NAVAL AIR TEST CENTER, PATUXENT RIVER, USA, LATE-1960s

The sole two-seat Crusader or "Twosader" built, with high visibility colors and appropriate "two-stick" marking on the fin. Serialized 143710, it was variously known as the XF8U-1T, F8U-1T and TF-8A. After several years at NASA's Langley establishment, it moved to Edwards AFB and was finally to crash due to engine problems in July 1978, fortunately without injury to the two crew.



HUGHES 500 SERIES

The egg-shaped OH-6 won a US Army LOH (Light Observation Helicopter) competition in 1961 and was given the Indian name Cayuse. However, when it reached the troops it unofficially became the "Loach." Minigun-armed, it served in Vietnam in the scout role and the Army bought 1434. Later developments produced the 500MD with TOW missiles and nose-mounted sight, the 500E with a more streamlined cabin and the 530F for high altitude use. Later machines (now produced under the McDonnell Douglas banner) can be identified by the T-tail, but all have skids.

OH-6A, US ARMY, DA NANG, VIETNAM, 1971

Olive Drab, broken only by the black Army titling on the boom, was the overall color for OH-6s. A six-barrel GE Minigun is mounted on the port side of the fuselage.



500M, DANISH ARMY FLYING SERVICE, VANDEL, DENMARK, 1980

One of 15 machines delivered in 1971 for observation duties with the Danish Army. In wartime, these would be deployed with units in the field.



500MC, GUARDIA DI FINANZE, ITALIAN MINISTRY OF THE INTERIOR, ITALY, 1981

Operated by the Treasury Guard, an agency of the Italian MoI, these brightly-colored helicopters are used against drug traffickers and smugglers.



500D, FINNISH AIR FORCE, UTTI, FINLAND, 1983

One of two machines (the other being HH-5) that were bought to replace two 500Cs operated in the liaison role. Note the unit badge on the rear door.

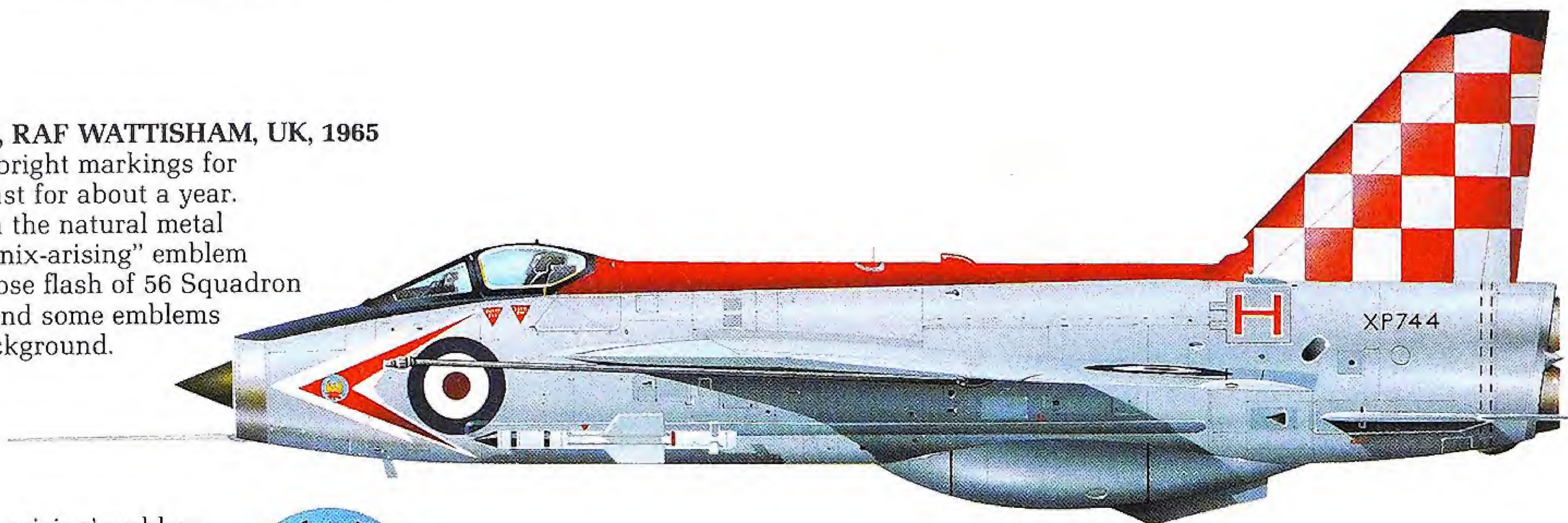


ENGLISH ELECTRIC LIGHTNING

The Lightning was the only all-British production fighter capable of flying at Mach 2 or twice the speed of sound. It began as the English Electric P.1, which made its first flight in August 1954, and progressed through the improved P.1B to the early Lightning F.1 which entered RAF service in 1960. There were eight basic marks of the aircraft and the type was exported to Kuwait and Saudi Arabia. Production totalled 337.

F Mk 3, 56 SQUADRON, RAF WATTISHAM, UK, 1965

This was the heyday of bright markings for the RAF which were to last for about a year. The colors were gloss on the natural metal (silver) finish. The "Phoenix-arising" emblem was positioned on the nose flash of 56 Squadron Lightnings at this time and some emblems appeared on a white background.



Close-up of the 'Phoenix-arising' emblem.

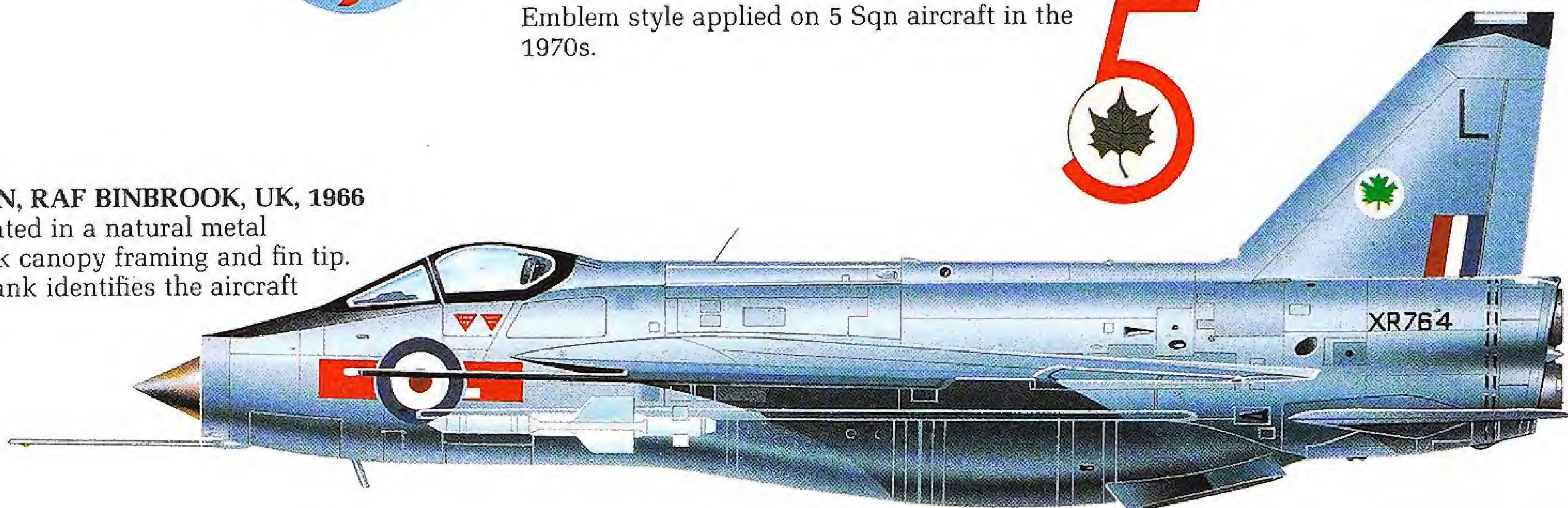


Emblem style applied on 5 Sqn aircraft in the 1970s.



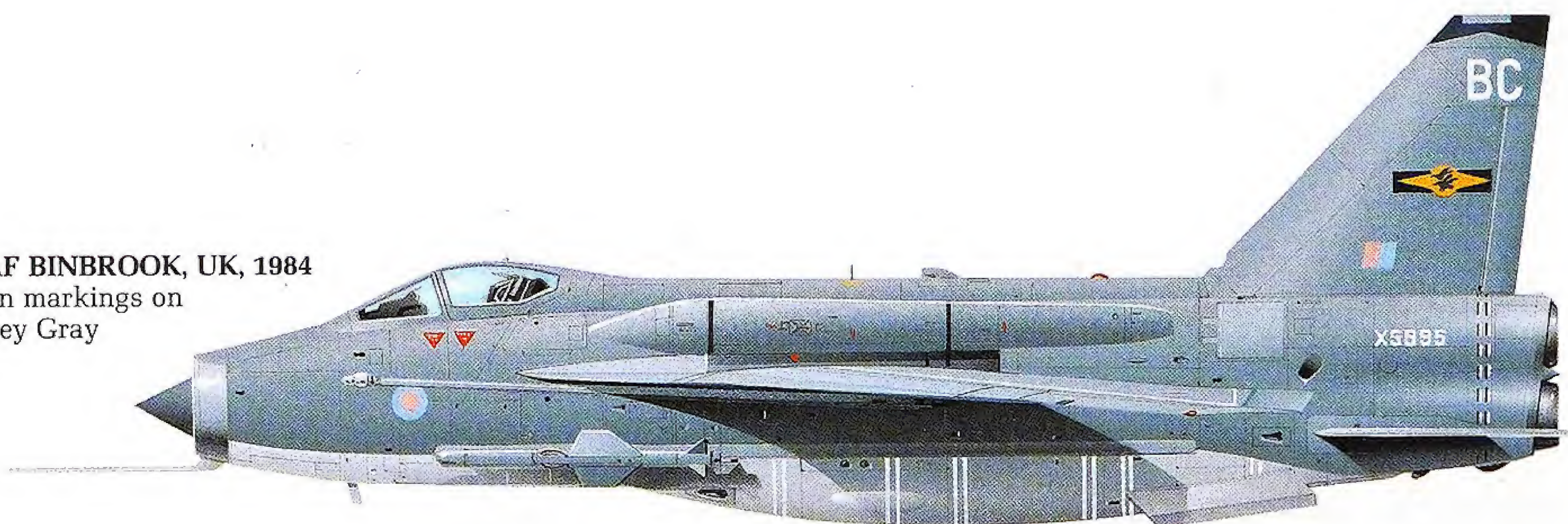
F Mk 6, 5 SQUADRON, RAF BINBROOK, UK, 1966

This Lightning is painted in a natural metal finish, with matt black canopy framing and fin tip. The big ventral fuel tank identifies the aircraft as an F.6 version.



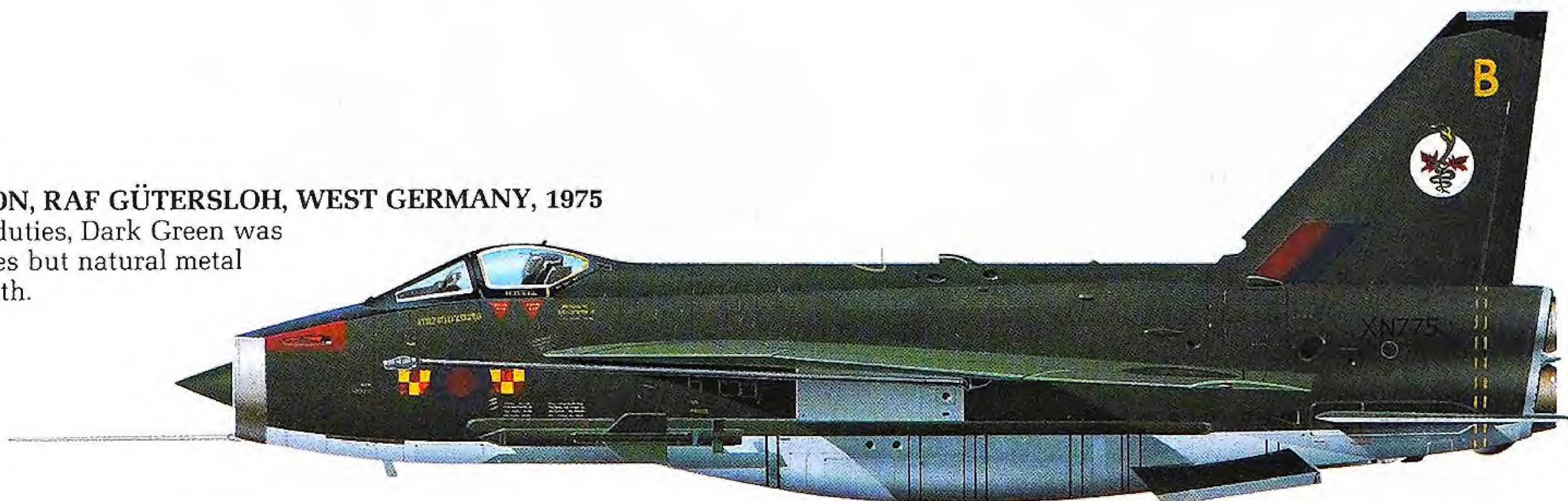
F Mk 6 11 SQUADRON, RAF BINBROOK, UK, 1984

This aircraft has toned down markings on Medium Sea Gray with Barley Gray undersides – all semi-matt.



F Mk 2A, 92 SQUADRON, RAF GÜTERSLOH, WEST GERMANY, 1975

For low level intercept duties, Dark Green was applied over top surfaces but natural metal still remained underneath.



CONVAIR F-106

Originally designated F-102B, the Dart was an outgrowth of the earlier aircraft and such were the improvements incorporated into the design that another number was allocated and the underrated, but fully capable, supersonic F-106 joined the air defense units of the USAF in October 1959. Production of 277 F-106As and 63 F-106B two-seat trainers ended in December 1960, but the type underwent various improvement programs to maintain its combat capability – even though, as it turned out, it was never to be proven.

F-106A, 460th FIGHTER INTERCEPTOR SQUADRON, USAF, OXNARD AFB, USA, 1968

One of 13 squadrons of Air Defense Command to have operated Darts, the 460th displays colorful insignia associated with this defender of the USA. Around the fuselage are the squadron commander's stripes.



F-106A, 159th FIS, 125th FIGHTER INTERCEPTOR GROUP, FLORIDA ANG, JACKSONVILLE, USA, 1975

This unit was one of several Air National Guard formations to get F-106s in the early 1970s. Super Falcon missiles or Genie rockets were the type's main armament, and some were fitted with an underbelly gun pack with a 20mm cannon.



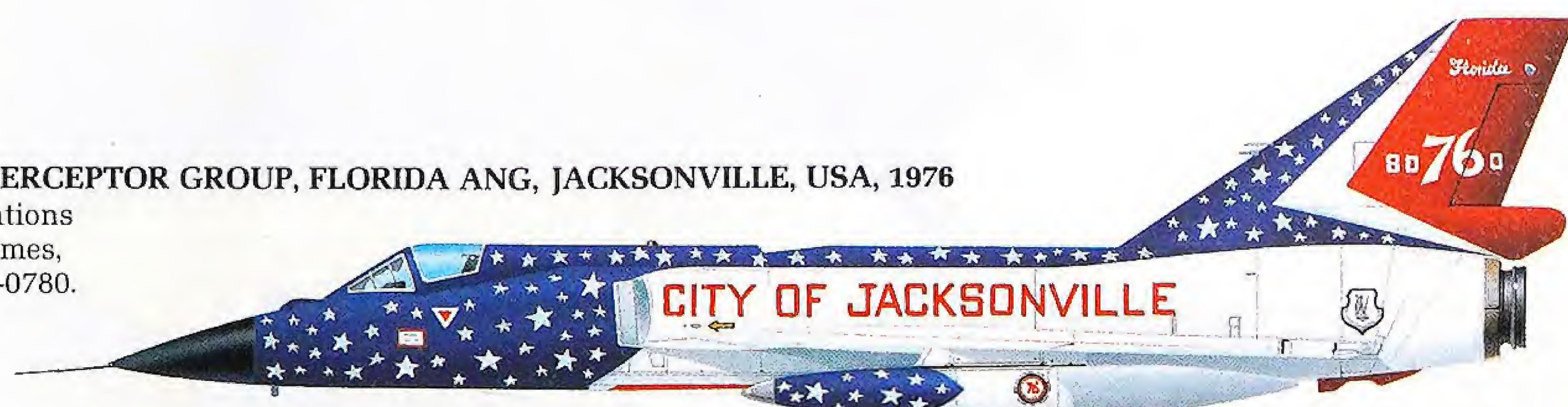
F-106A, 49th FIS, USAF, GRIFFISS AFB, USA, EARLY 1970s

Basic color for Darts was Light Gray with a matt black anti-glare panel in front of the cockpit encompassing the nose radome. Unit decoration was usually applied to the underwing fuel tanks as well as to the fin and rudder, as in this case.



F-106A, 159th FIS, 125th FIGHTER INTERCEPTOR GROUP, FLORIDA ANG, JACKSONVILLE, USA, 1976

The 1976 American Bicentennial celebrations prompted many adventurous paint schemes, including this one applied to aircraft 58-0780.



F-106B, 195th FIS, CALIFORNIA AIR NATIONAL GUARD, FRESNO, USA, 1980

The longer canopy and raised fuselage top-line of the two-seat conversion trainer is shown to advantage in a side view. The cut-out in the middle of the fuselage is for the tanker probe for air-to-air refueling.

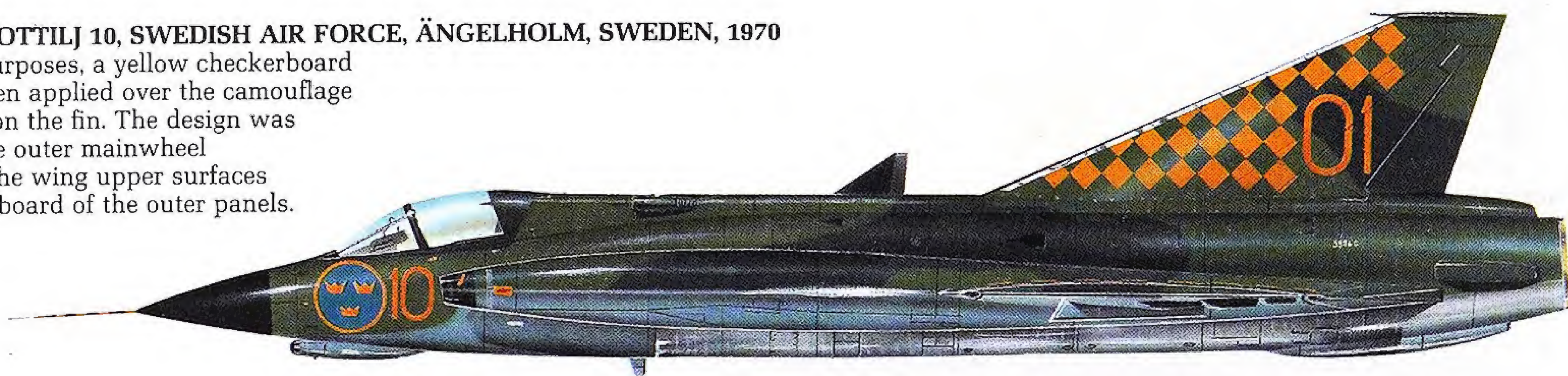


SAAB DRAKEN

Its double delta-wing design still unique among the world's combat jets, the Swedish Draken single seat fighter remains in front-line service with the Swedish, Finnish, Danish and Austrian air forces some 35 years after the prototype first flew. Originally designed to intercept bombers, the Draken now also undertakes reconnaissance and attack roles. Armament includes two internal 30mm cannon and up to nine attachment points for bombs, rockets or missiles. Production reached 606.

J 35F, FLYGFLÖTTILJ 10, SWEDISH AIR FORCE, ÄNGELHOLM, SWEDEN, 1970

For exercise purposes, a yellow checkerboard pattern has been applied over the camouflage of two greens on the fin. The design was repeated on the outer mainwheel doors and on the wing upper surfaces immediately inboard of the outer panels.



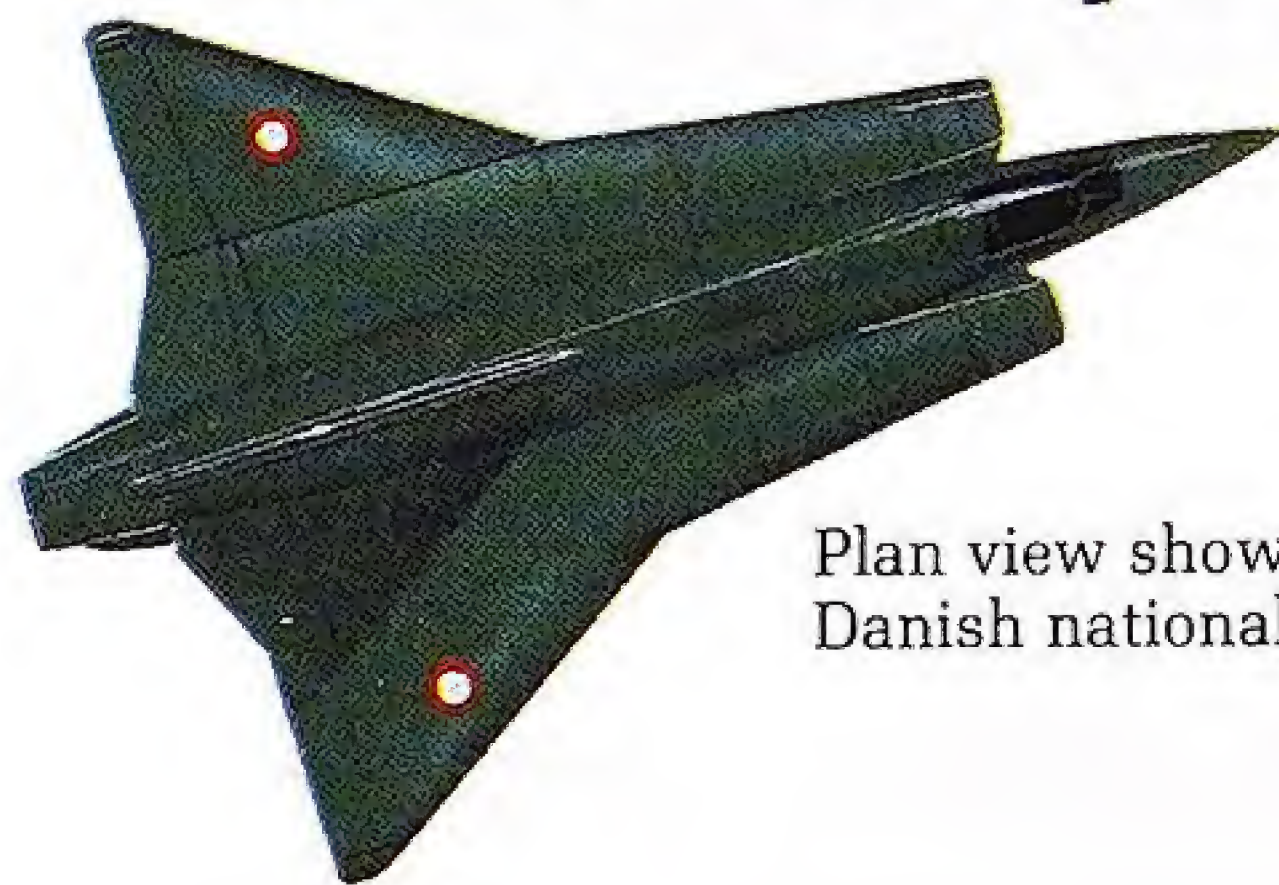
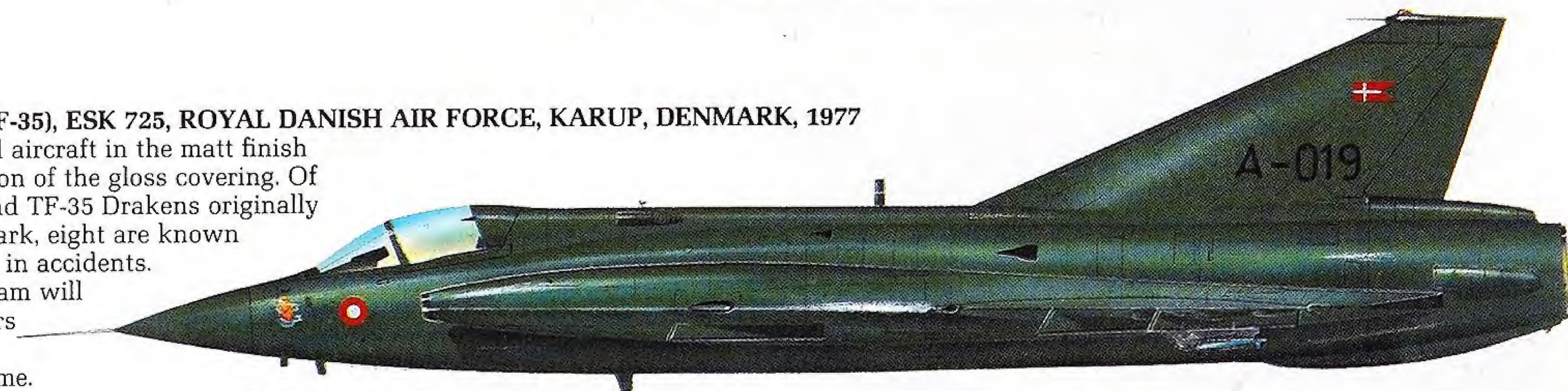
S 35XD (ALIAS RF-35), ESK 729, ROYAL DANISH AIR FORCE, KARUP, DENMARK, 1977

The poor weather resistance of matt Olive Drab resulted in most Danish aircraft looking extremely worn. This was rectified more recently by giving them a high gloss finish, although reflectivity was then a problem. Note the camera nose on this aircraft.



A 35XD (ALIAS F-35), ESK 725, ROYAL DANISH AIR FORCE, KARUP, DENMARK, 1977

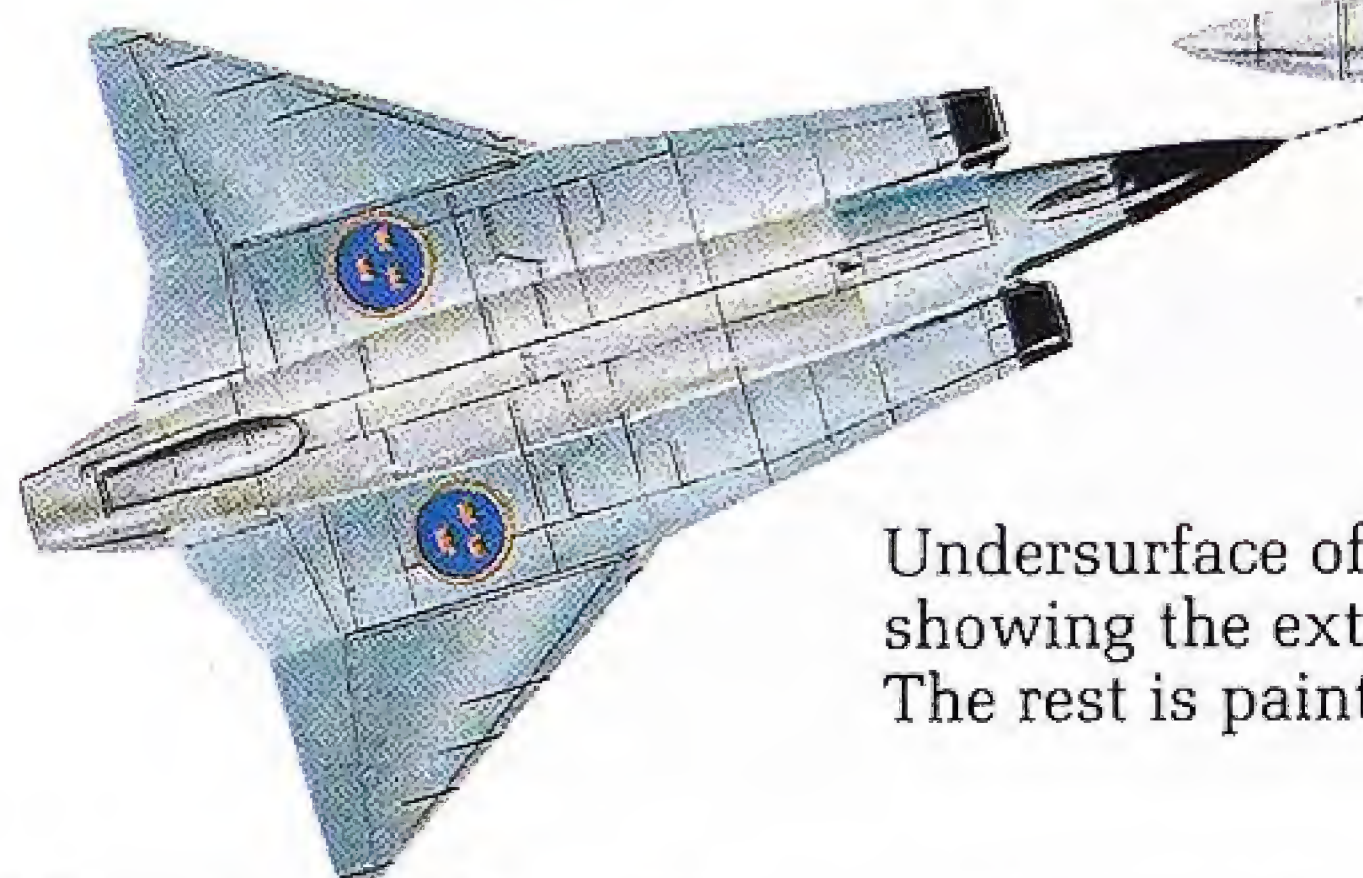
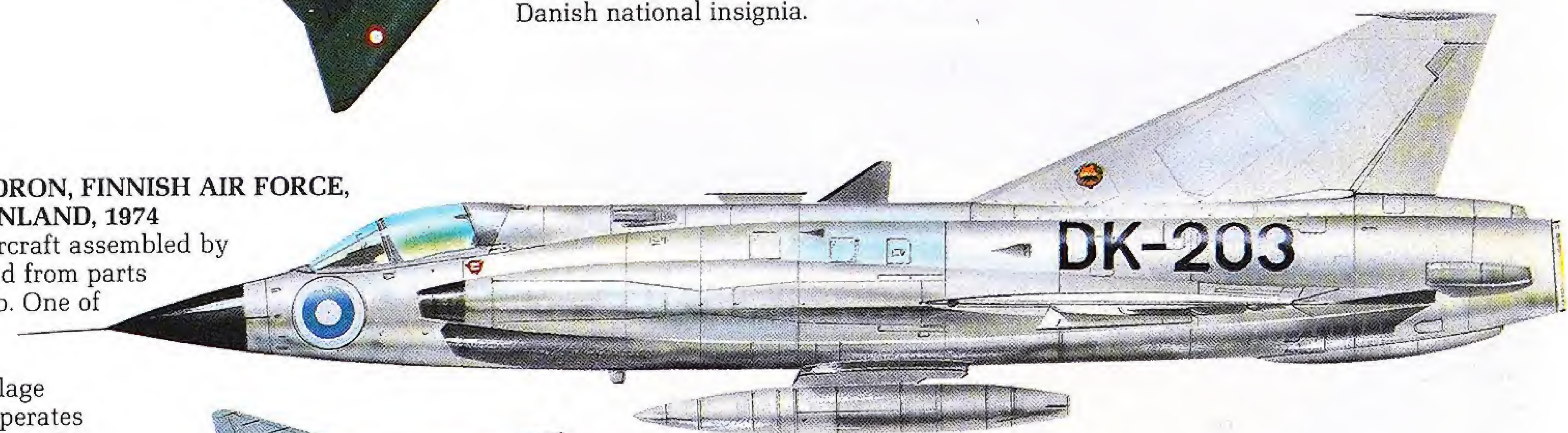
A freshly painted aircraft in the matt finish prior to application of the gloss covering. Of 51 F-35, RF-35 and TF-35 Drakens originally bought by Denmark, eight are known to have been lost in accidents. An update program will keep the survivors flying for some years to come.



Plan view showing the position of the Danish national insignia.

35XS, 11 SQUADRON, FINNISH AIR FORCE, ROVANIEMI, FINLAND, 1974

An unpainted aircraft assembled by Valmet in Finland from parts supplied by Saab. One of 12 in service, it later received a coat of camouflage paint and now operates alongside 11 others of its mark in a fleet of some 45 Drakens, both single and two-seaters.



Undersurface of a Swedish-flown aircraft, showing the extent of the natural metal area. The rest is painted light blue.

WESTLAND SEA KING

The Westland-built version of the Sikorsky SH-3 Sea King has been in production for more than 20 years, with some 14 versions designed for UK and overseas armed forces. Since its first flight on 7 May 1969 the Westland Sea King has been developed and continually updated so that it has become a highly advanced submarine hunter. Versions are in service with Australia, Belgium, Egypt, Norway, Pakistan and West Germany. A Commando variant is also in use, capable of accommodating up to 28 troops.

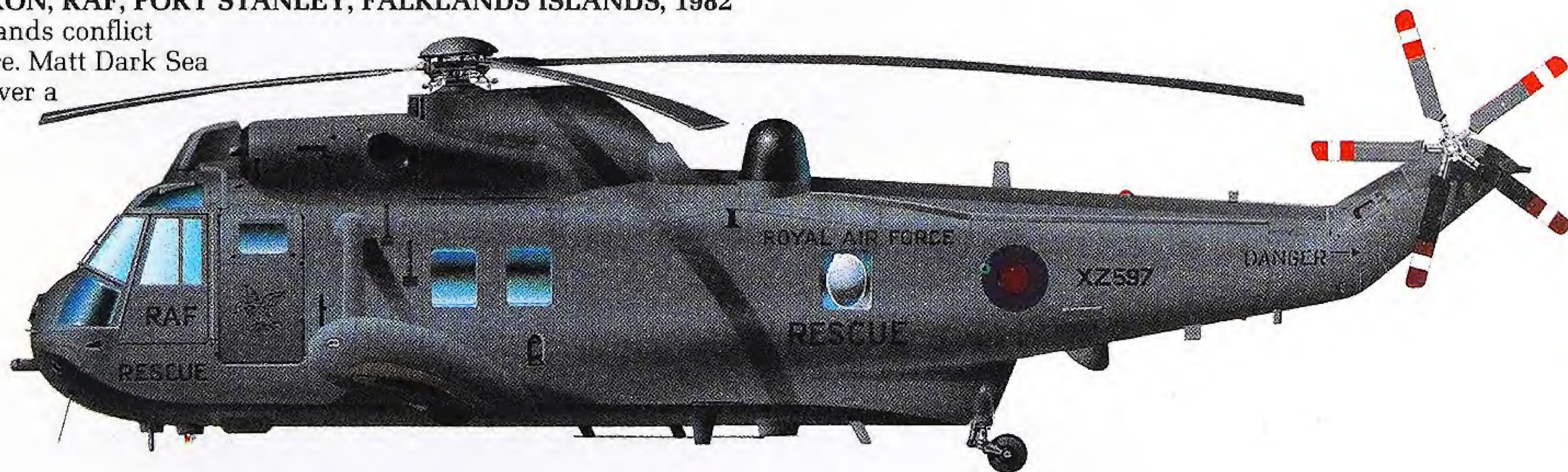
HC. Mk 4, 846 SQUADRON, RNAS YEOVILTON, UK, 1982

The finish of matt Olive Drab was applied to Commando assault versions during the Falklands conflict. The markings are toned down except for the tail rotor warning.



HAR. Mk 3, 22 SQUADRON, RAF, PORT STANLEY, FALKLANDS ISLANDS, 1982

An example of the Falklands conflict camouflage is shown here. Matt Dark Sea Gray has been applied over a Yellow search and rescue finish.



HAS. Mk 5, 826 SQUADRON, RN FLEET AIR ARM, HMS 'HERMES', 1982

Another Falklands conflict scheme. It is colored in Extra Dark Sea Gray overall for South Atlantic operations, with white overpainted in blue in the roundel.



Mk 41, MFG 5, MARINEFLIEGER, KIEL, WEST GERMANY

22 were ordered in May 1969. They are used for SAR search and rescue duties, hence the high-visibility finish. More recently, these machines have received a toned-down gray scheme, in keeping with NATO policy.

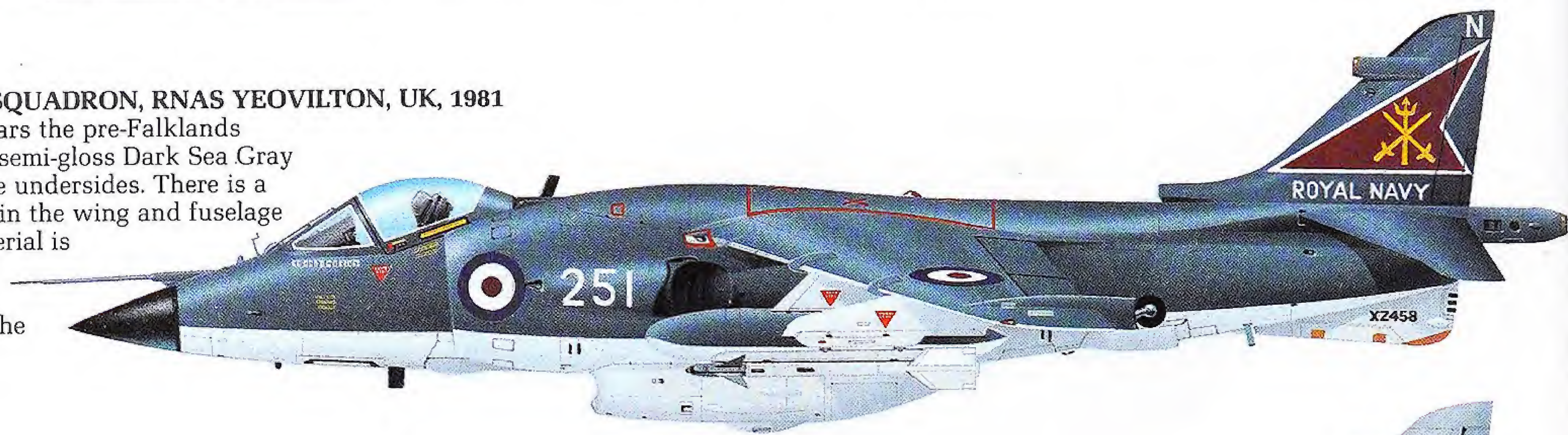


BRITISH AEROSPACE SEA HARRIER

The Sea Harrier was ordered for the Royal Navy in 1975 and entered service with 800 Squadron in April 1980. Unlike the Harrier, the maritime version has Blue Fox radar in the nose, a raised cockpit canopy and provision for anti-ship missiles. During the Falklands conflict, Sea Harriers accounted for at least 20 Argentine aircraft with no loss to themselves. The type is also operated by the Indian Navy. Royal Navy variants are the FRS.1, FRS.2 and the two-seat T.4N.

FRS. Mk 1 800 SQUADRON, RNAS YEOVILTON, UK, 1981

This aircraft wears the pre-Falklands color scheme of semi-gloss Dark Sea Gray and Gloss White undersides. There is a Type D roundel in the wing and fuselage positions. The serial is almost invisible in the standard position below the tail plane.



FRS. Mk 1, 809 SQUADRON, ROYAL NAVY, HMS "HERMES," 1982

The color scheme is Medium Sea Gray with Barley Gray under the wings and tailplanes. A single Mirage "kill" was later recorded under the cockpit after this aircraft operated during the Falklands conflict.



FRS. Mk 1, 899 SQUADRON, ROYAL NAVY, HMS "HERMES", 1982

Painted Extra Dark Sea Gray overall for the South Atlantic campaigns. Note the Medium Sea Gray rear canopy framing.



In this plan view the red maintenance markings stand out, particularly the engine access panel in the center. The original red-white-blue roundels were changed by hand-painting to the dull red-blue style.



Standard armament 'fit' for the air-to-air role, comprising Sidewinder missiles outboard, drop tanks and 30mm Aden gun pods under the fuselage.

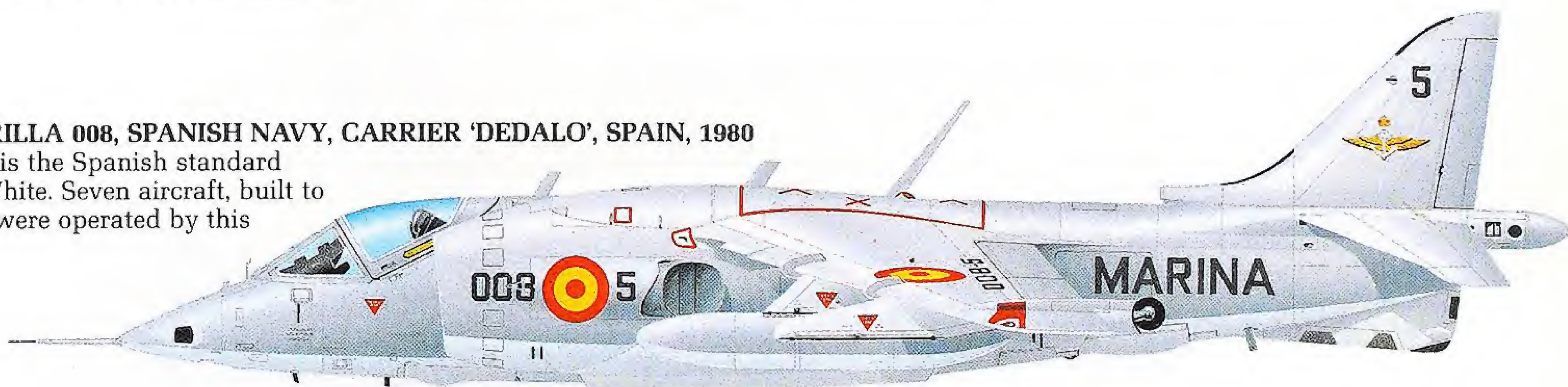


BRITISH AEROSPACE HARRIER

Using the power of its single Rolls-Royce Pegasus jet engine, the Harrier revolutionized air warfare with its ability to operate without the need for long, vulnerable runways. Provided with fuel and weapons, it can operate from almost any dispersed site unseen by the enemy. The first flight was on 13 March 1961 and entry into RAF service was on 1 April 1969. The latest of seven versions is the GR.5/AV-8B for the RAF and the US Marines. Production to date (including Sea Harriers) is about 700.

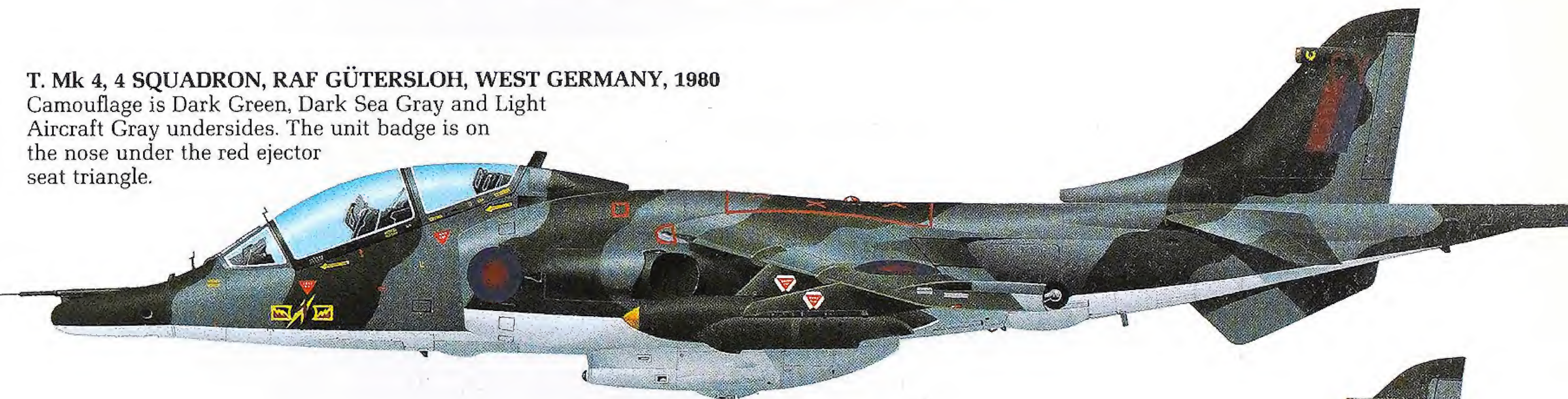
Mk 50, ESCUADRILLA 008, SPANISH NAVY, CARRIER 'DEDALO', SPAIN, 1980

The color scheme is the Spanish standard Light Gray and White. Seven aircraft, built to AV-8A standard, were operated by this squadron.



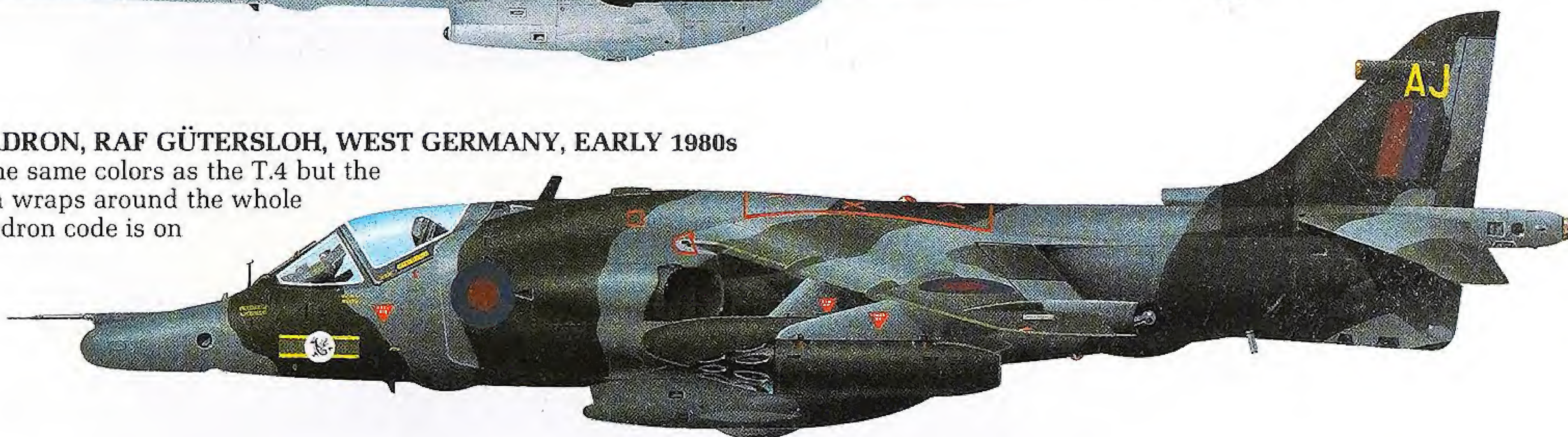
T. Mk 4, 4 SQUADRON, RAF GÜTERSLOH, WEST GERMANY, 1980

Camouflage is Dark Green, Dark Sea Gray and Light Aircraft Gray undersides. The unit badge is on the nose under the red ejector seat triangle.



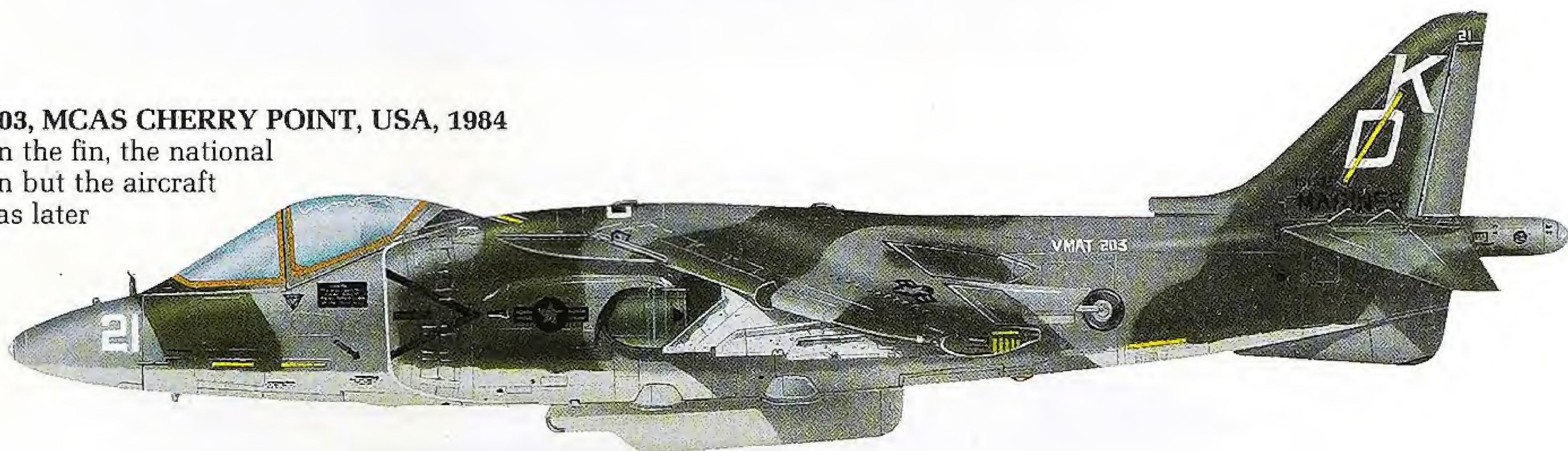
GR. Mk 3, 3 SQUADRON, RAF GÜTERSLOH, WEST GERMANY, EARLY 1980s

This aircraft has the same colors as the T.4 but the camouflage pattern wraps around the whole airframe. The squadron code is on the fin tip.



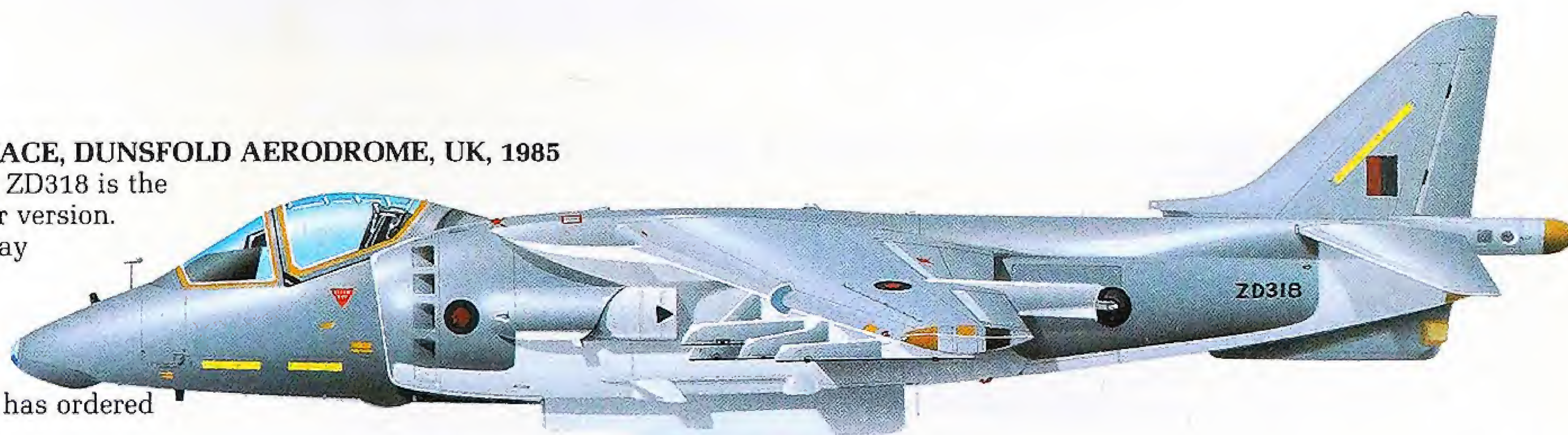
Mk II (AV-8B) VMAT-203, MCAS CHERRY POINT, USA, 1984

The unit code (KD) is on the fin, the national insignia are toned down but the aircraft number is white – it was later overpainted black.



GR. Mk 5, BRITISH AEROSPACE, DUNSFOLD AERODROME, UK, 1985

First flown on 30 April, 1985, ZD318 is the first of the RAF's latest Harrier version. Although it was given this gray toned-down color scheme, production aircraft received a finish of two greens which gives a better camouflage for low-level operations. The RAF has ordered 94 of this version.

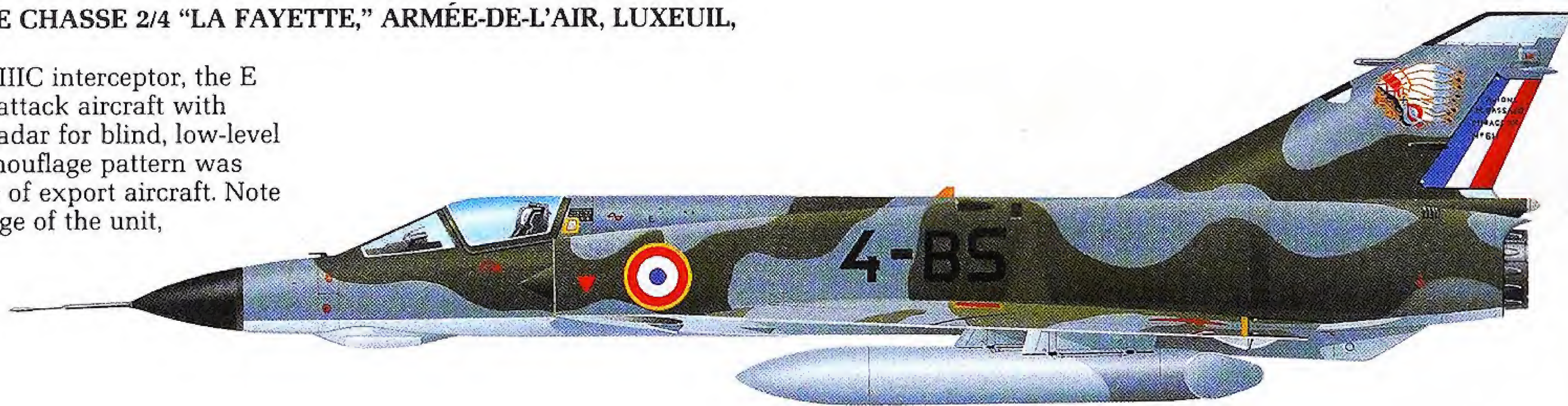


DASSAULT MIRAGE III

For most people, the Mirage symbolizes French military aircraft best of all. It gained the respect of Arab air forces during the 1967 war and proved a thorn in the side of the British during the Falklands conflict in 1982. The Mirage III was the first European fighter to attain Mach 2 in level flight (in 1958); the versatility of the design has enabled production of trainer, recce and ground-attack versions as well as a much-simplified variant, the 5 Series. Production exceeds 1400.

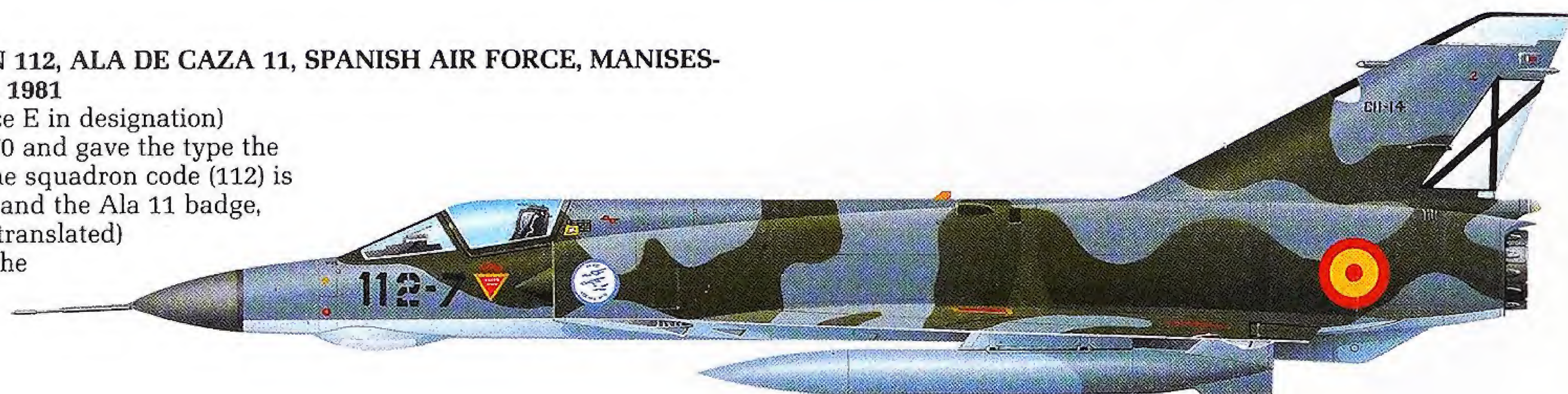
IIIE, ESCADRON DE CHASSE 2/4 "LA FAYETTE," ARMÉE-DE-L'AIR, LUXEUIL, FRANCE, 1977

Developed from the IIIC interceptor, the E version is a ground-attack aircraft with increased fuel and radar for blind, low-level navigation. This camouflage pattern was applied to a number of export aircraft. Note the indian head badge of the unit, which dates back to World War I.



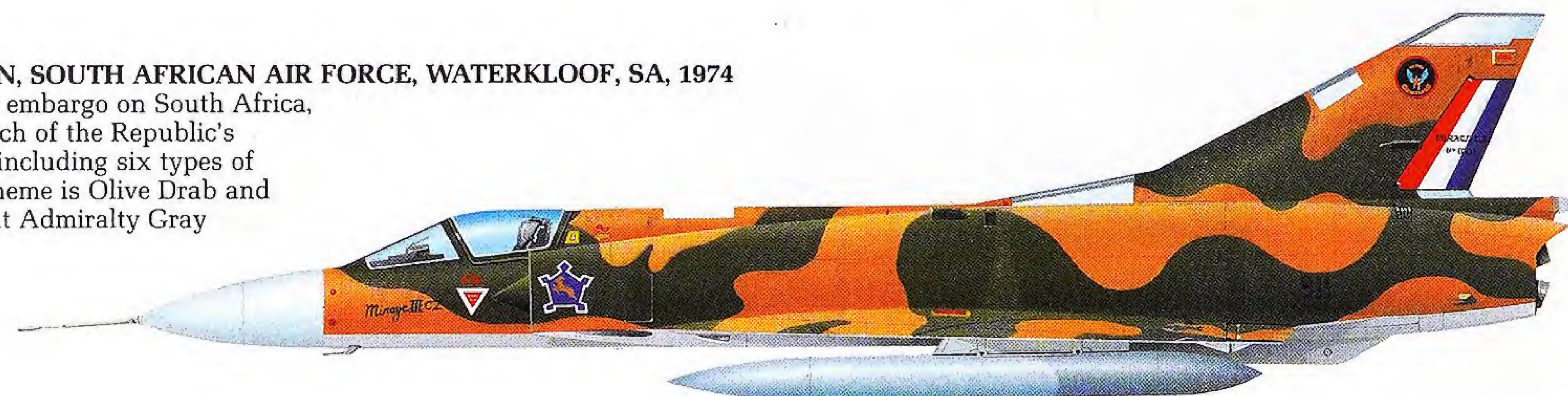
IIIEE, ESCUADRON 112, ALA DE CAZA 11, SPANISH AIR FORCE, MANISES-VALENCIA, SPAIN, 1981

Spain (España: hence E in designation) purchased 24 in 1970 and gave the type the C.11 designation. The squadron code (112) is applied to the nose, and the Ala 11 badge, bearing the legend (translated) "Sight, luck and to the bull", is on the intake.



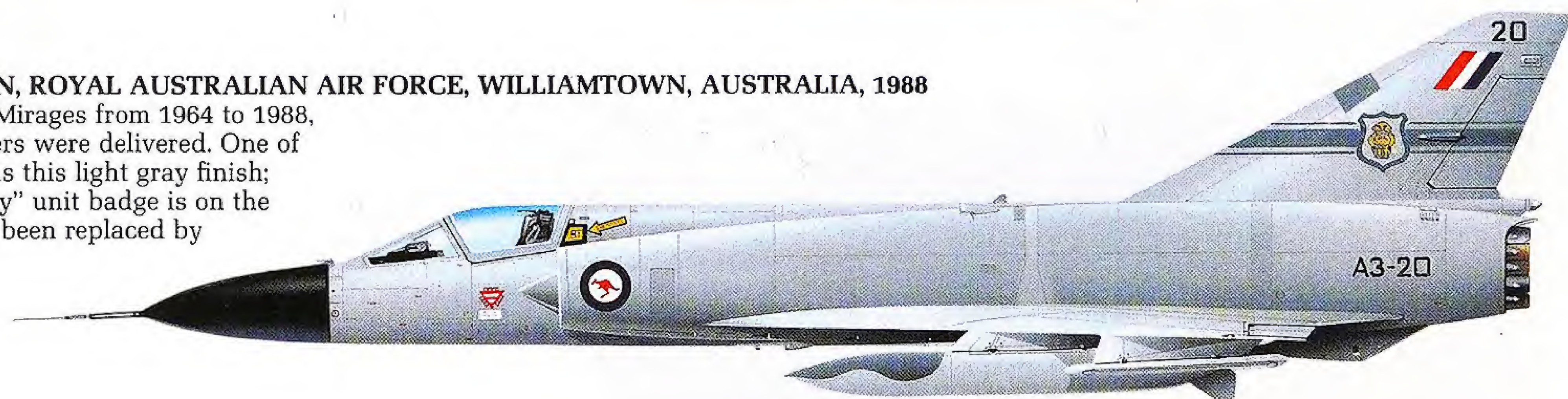
IIICZ, 2 SQUADRON, SOUTH AFRICAN AIR FORCE, WATERKLOOF, SA, 1974

Before the UN arms embargo on South Africa, France supplied much of the Republic's military equipment including six types of Mirage III. Color scheme is Olive Drab and Deep Buff with Light Admiralty Gray undersides.



IIIO, 77 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, WILLIAMTOWN, AUSTRALIA, 1988

Australia operated Mirages from 1964 to 1988, and 100 single-seaters were delivered. One of the last schemes was this light gray finish; the "grumpy monkey" unit badge is on the fin. The Mirage has been replaced by the F-18 Hornet.



IIIEA, 1 ESCUADRON, VIII BRIGADA AEREA, ARGENTINE AIR FORCE, RIO GALLEGOS, ARGENTINA, 1982

During the Falklands conflict, Argentina's Mirage interceptors maintained air patrols to combat a possible RAF Vulcan strike against continental bases. The external load for these missions consisted of a Matra 530 and two Magic AAMs under fuselage and wings plus two 374 Imp gal drop-tanks.

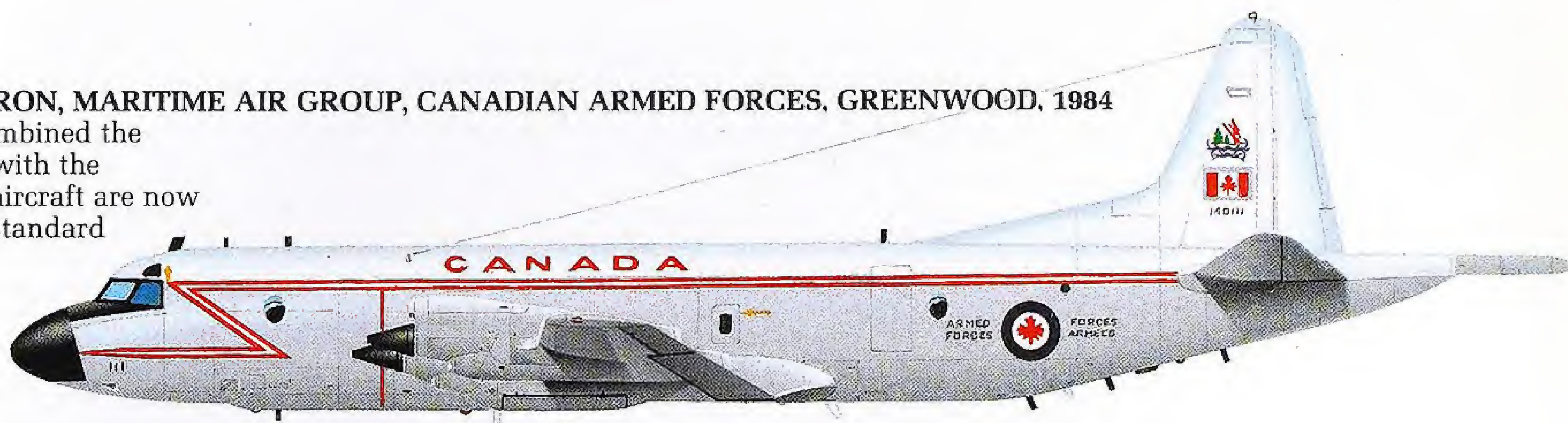


LOCKHEED P-3 ORION

A development of the Lockheed Electra airliner, the P-3 Orion turboprop-powered maritime patrol and anti-submarine aircraft was designed for the US Navy and the prototype flew on 19 August 1958. Production P-3As entered service in 1962 and later variants included the P-3B, P-3C Update series, EP-3E for electronics use, P-3F and the Canadian Aurora version. Ten nations operate the type and 641 were produced.

CP-140 AURORA, 404 SQUADRON, MARITIME AIR GROUP, CANADIAN ARMED FORCES, GREENWOOD, 1984

The Canadian Orion variant combined the avionics from the S-3A Viking with the airframe of the P-3C. These 18 aircraft are now finished in a dull gray scheme standard to most CAF airplanes.



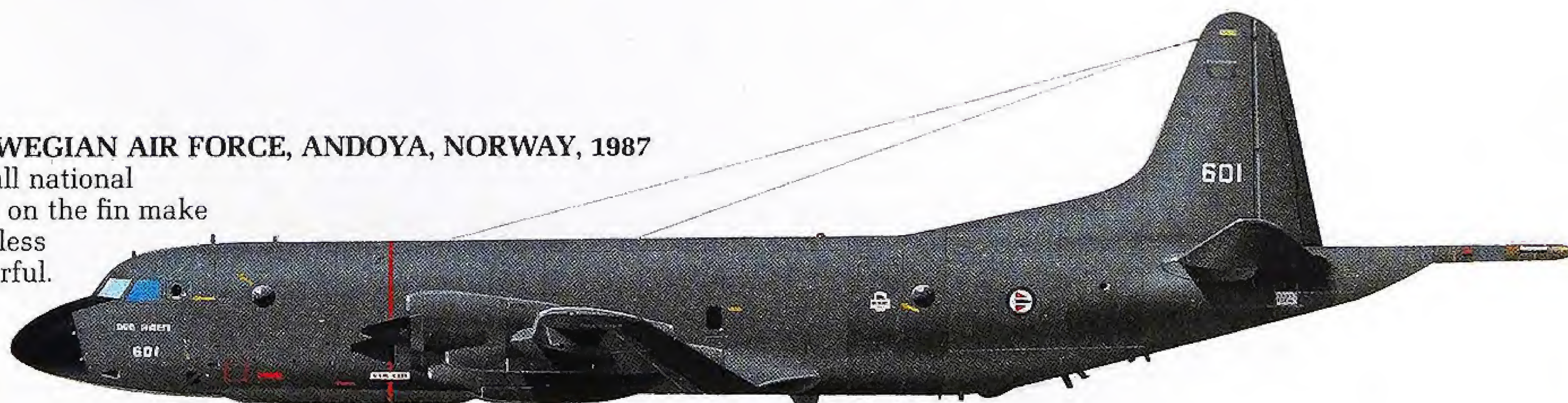
P-3C, FLEET SQUADRON 3, JAPANESE MARITIME SELF-DEFENSE FORCE, JAPAN

Japan license-built the Orion from 1982 onwards and at least 100 are planned to be produced. Within the JMSDF's identification system, prefix 5 in the tail number indicates a 4-engined ASW (anti-submarine warfare) aircraft and 015 is the 15th machine of its type in service.



P-3B, Skv 333, ROYAL NORWEGIAN AIR FORCE, ANDOYA, NORWAY, 1987

Dark gray overall with a small national insignia and aircraft number on the fin make Norwegian Orions tactically less easy to identify and less colorful.



P-3A, Esc.221, Ala 22, SPANISH AIR FORCE, JEREZ, SPAIN, 1987

A refurbished ex-USN aircraft retaining its Light Gull Gray and Gloss White finish with unit number (221) and aircraft number (21) on nose.



P-3F, ISLAMIC REPUBLIC OF IRAN AIR FORCE, BANDAR ABBAS, IRAN, 1981

Six Orions were delivered in the late Seventies in this three-toned blue finish. The paint finish of this scheme is deliberately rough. A small number are believed to be still airworthy despite spares shortages due to the Iraqi-Iranian conflict.







Vietnam and Beyond

1961-the present day

AEROSPATIALE ALOUETTE III	158	MCDONNELL DOUGLAS F-15	
AEROSPATIALE/WESTLAND		EAGLE	184
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GRUMMAN F-14 TOMCAT	181	BLACK HAWK/SEAHAWK	188
LOCKHEED F-104		SUKHOI Su-7	180
STARFIGHTER	171	VOUGHT A-7 CORSAIR II	170
LOCKHEED S-3 VIKING	185	WESTLAND LYNX	189

MCDONNELL DOUGLASF-4 PHANTOM II

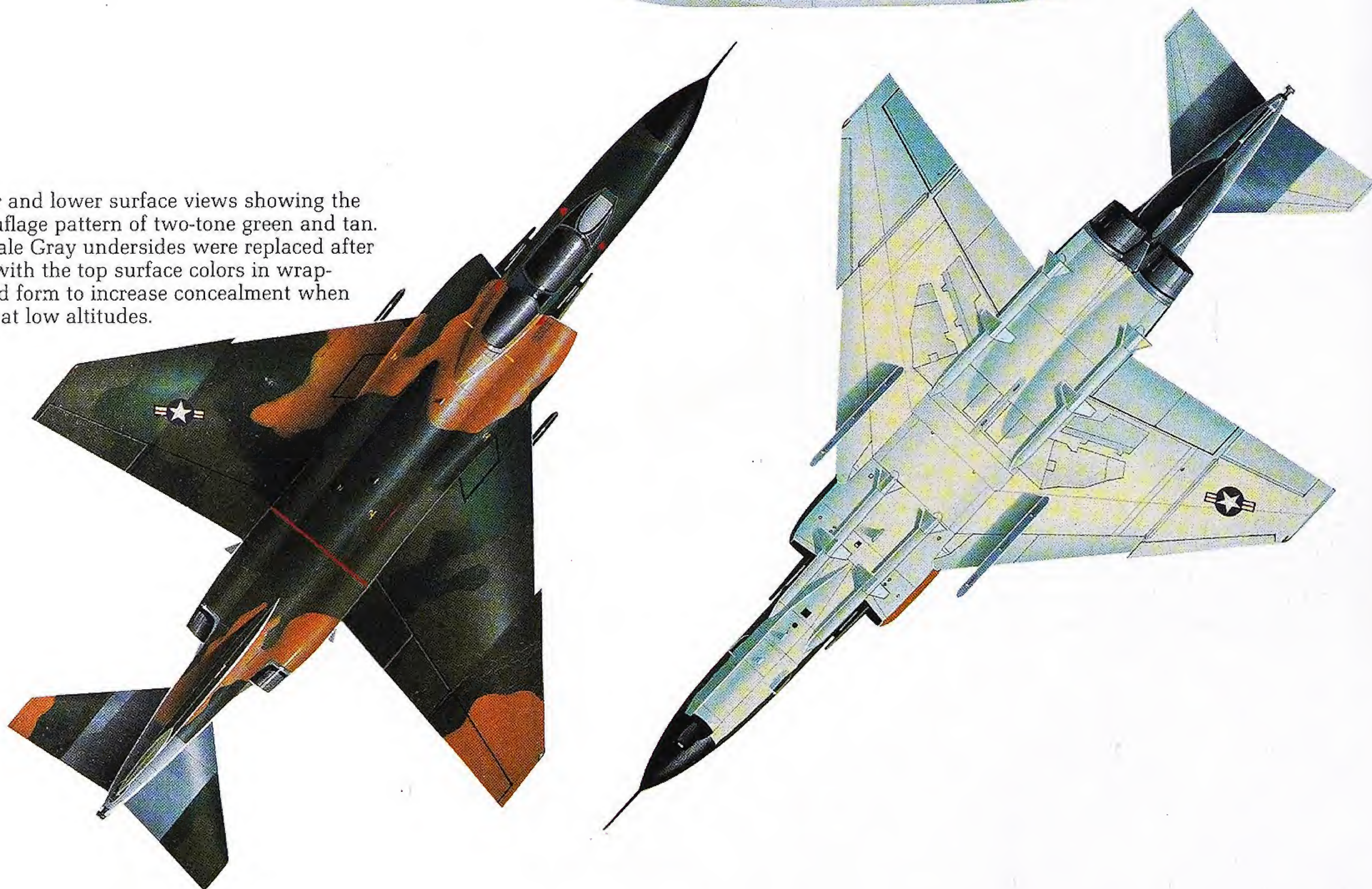
Designed initially for carrier-based operation with the US Navy, the Phantom was subsequently adopted by both the Marine Corps and the US Air Force. The prototype F4H-1 first flew in May 1958 and 23 years later, the 5201st and last new-build Phantom rolled off the production line. Armed with cannon and missiles, the type still serves with at least ten air forces and the various update programs now under consideration should ensure the Phantom will be around into the 21st century.

RF-4C, 38th TACTICAL RECONNAISSANCE SQUADRON, 26th TRW, USAF, ZWEIBRUCKEN AB, WEST GERMANY, 1970s

Shown prior to the application of "European Onie" camouflage of charcoal gray and two-tone greens, this Germany-based aircraft has the SE Asia finish with 24in high code letters on the fin and 15in high digits in its serial number below.



Upper and lower surface views showing the camouflage pattern of two-tone green and tan. The Pale Gray undersides were replaced after 1980 with the top surface colors in wrap-around form to increase concealment when flying at low altitudes.



F-4C, 171st FIGHTER INTERCEPTOR SQUADRON, MICHIGAN AIR NATIONAL GUARD, SELFRIDGE ANGB, USA, 1980

Overall Gloss Gray was a scheme adopted for Air Defense Command F-4s from 1979. The fuselage lettering was 12in high while the national star had a diameter of 30in.



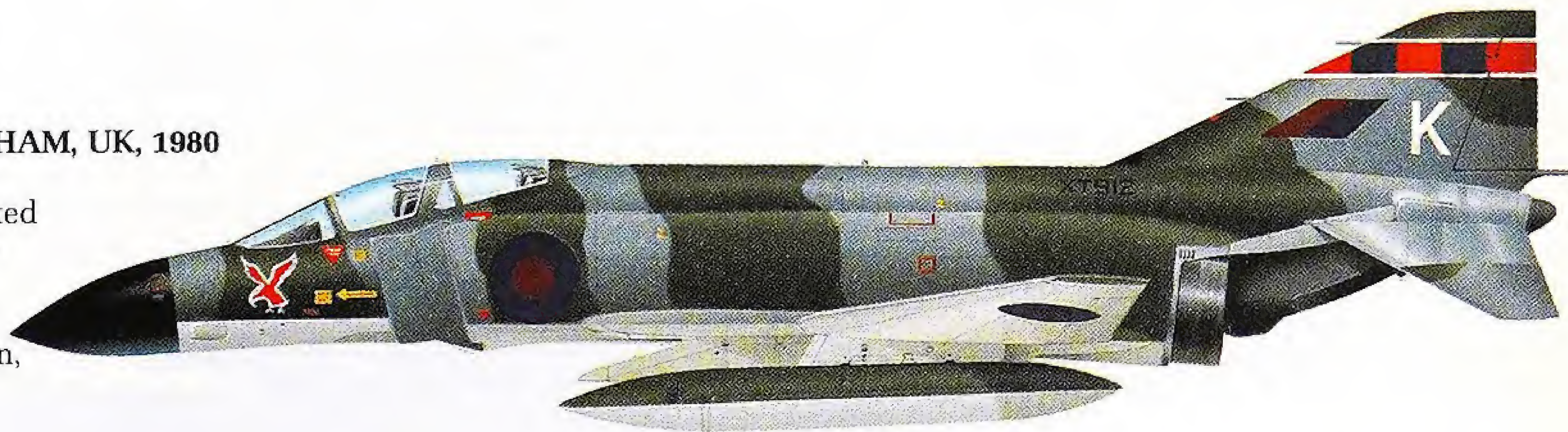
FG Mk 1, 43(F) SQUADRON, RAF LEUCHARS, UK, 1980

The RAF adopted a three-tone gray camouflage for its air defense Phantoms from 1980. This aircraft of the famous "Fighting Cocks" squadron is shown before the addition of the black and white checks either side of the 12in diameter low-visibility fuselage roundel: these were added from 1982.



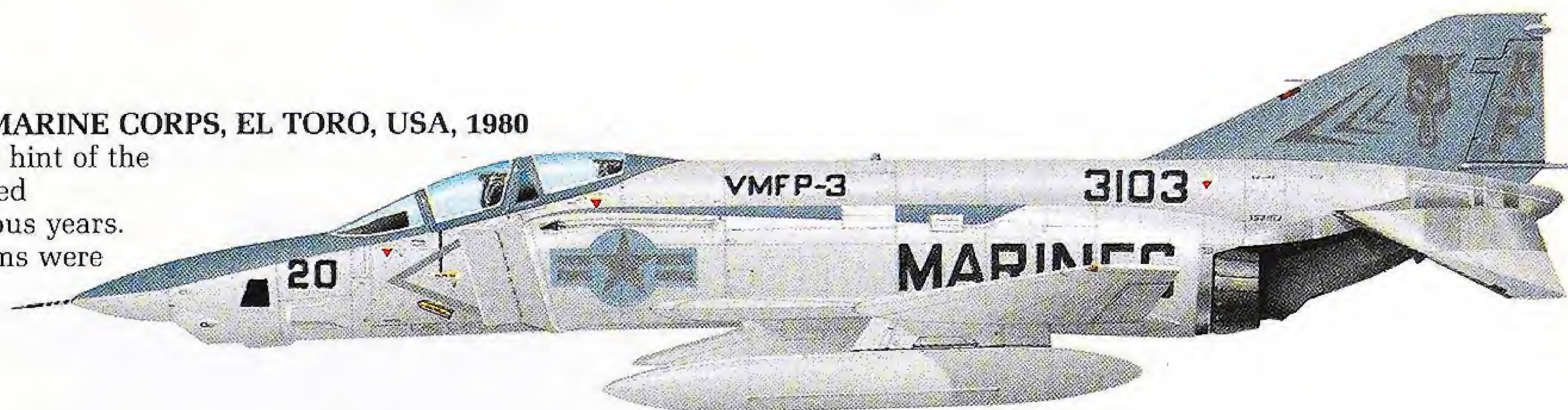
FGR Mk 2, 23 SQUADRON, RAF WATTISHAM, UK, 1980

Before the introduction of the grey low-visibility scheme, RAF-operated aircraft looked like this. An RWR (radar warning receiver) pod was subsequently fitted to the fin tip, many units preferring to apply their traditional marking to that instead of the fin, as in this case.



RF-4B, VMFP-3 SQUADRON, US MARINE CORPS, EL TORO, USA, 1980

Low-visibility markings with just a hint of the old flamboyance which characterized American military aircraft of previous years. 46 of these reconnaissance Phantoms were delivered to the USMC.



F-4EJ, 301 HIKOTAI, 7th KOKUDAN, JAPANESE AIR SELF-DEFENSE FORCE, HYAKURI, JAPAN, 1980

140 Phantoms were built for the JASDF, all but the first two by Mitsubishi. This green-gray camouflaged example bears the frog emblem of the unit, seven stars on the yellow muffler indicating the 7th Kokudan.



F-4F, JAGDGESCHWADER (JG) 71 "RICHTHOFEN," WEST GERMAN AIR FORCE, WITTMUNDHAFEN, 1981

Medium and light gray camouflage known as "Norm 81," was applied to aircraft of this unit and those of JG74 "Molders" in the early 1980s. On the engine intake is a small unit emblem. The Luftwaffe received 175 F-4Fs and 88 RF-4E recce versions.



F-4E, ISRAELI DEFENSE FORCE/AIR FORCE, ISRAEL, 1987

The Green, Brown and Sand disruptive scheme has proved an acceptable camouflage for operations over the desert, this typical Israeli Phantom also carrying the IAF badge at the top of the fin. Like most F-4s, the aircraft has luminous strips on the nose, fuselage and fin for night formation flying.



AEROSPATIALE ALOUETTE III

The Alouette (Lark) II was the original design from which was to come the more powerful Alouette III. This was to establish Aérospatiale (formerly Sud Aviation) as Europe's leading helicopter company. Deliveries of 1455 machines to 75 countries is no mean feat, and although French production has now ceased, the type continues to appear in much modified form from other countries, notably Romania with the Airfox gunship and South Africa with another combat version.

CHETAK, INDIAN AIR FORCE, 1984

The IAF operates both French-built and Hindustan Aeronautics-built Alouettes with an estimated 175 in service. Duties include SAR, liaison, training, etc.



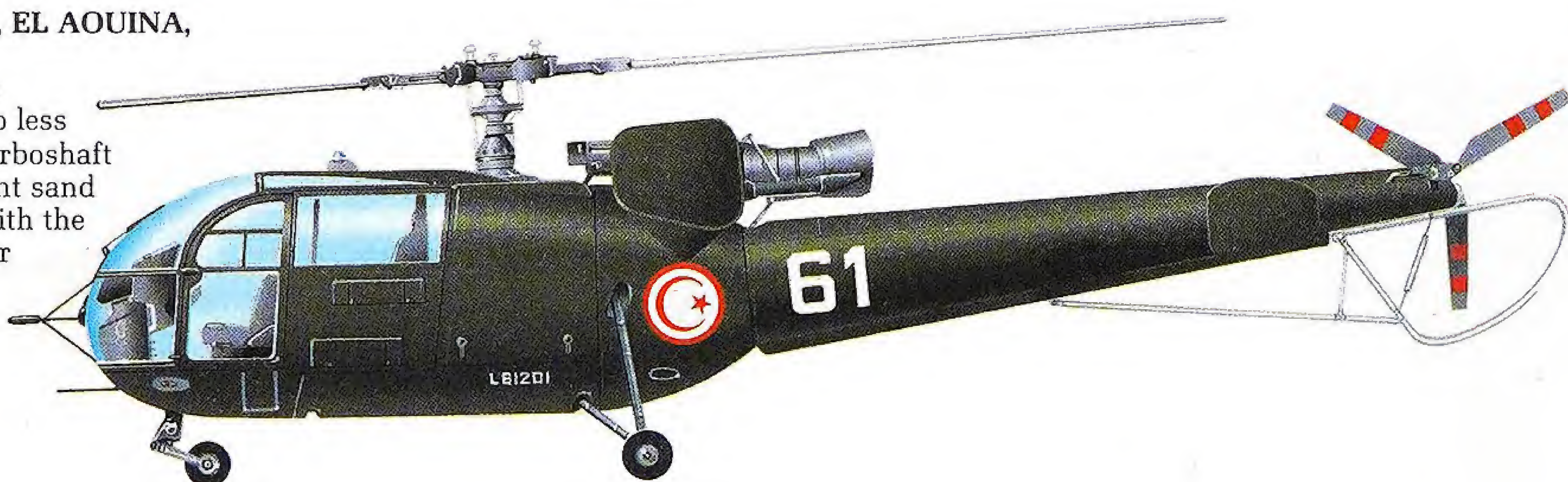
ALOUETTE III, NO 1 SUPPORT WING, IRISH AIR CORPS, BALDONNEL, EIRE, 1984

Marked with a prominent tricolor behind the segmented IAC insignia, the Irish machines operate on a variety of tasks including SAR, liaison and border patrol. The prominent tail guard prevents damage to the rotor.



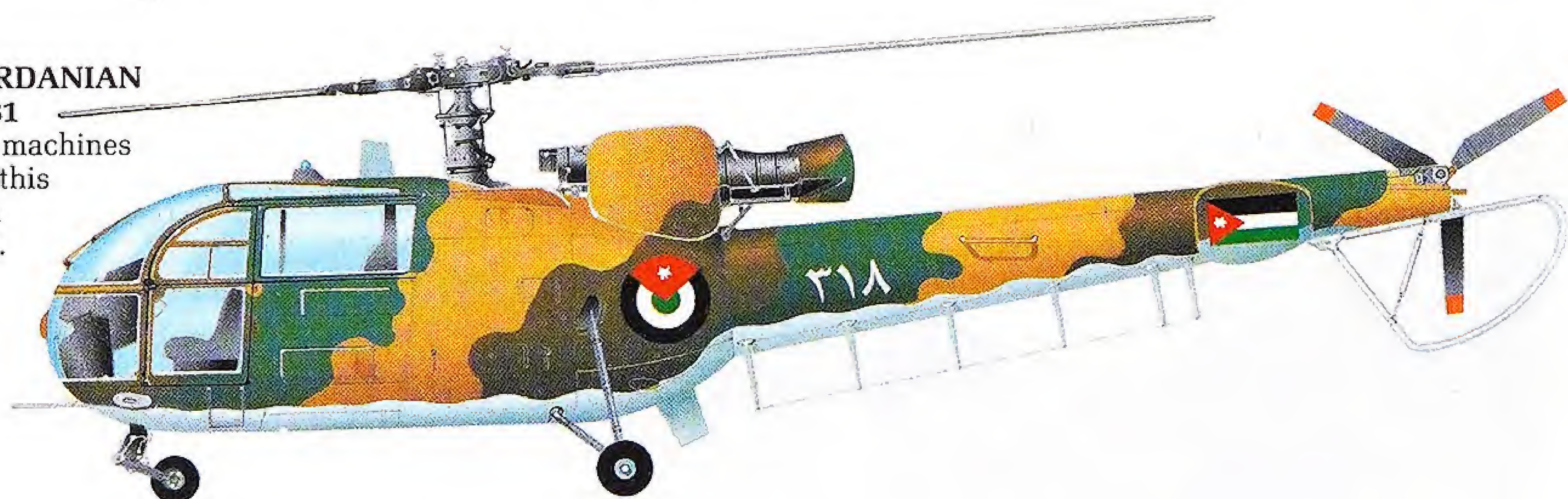
SA. 361B, TUNISIAN AIR FORCE, EL AOUIA, TUNISIA, 1984

Eight were originally supplied, but numbers have probably dropped to less than five. The exposed Artouste turboshaft engine incorporates an all important sand filter over the bell-mouth intake, with the exhaust projecting behind and over the tail boom.



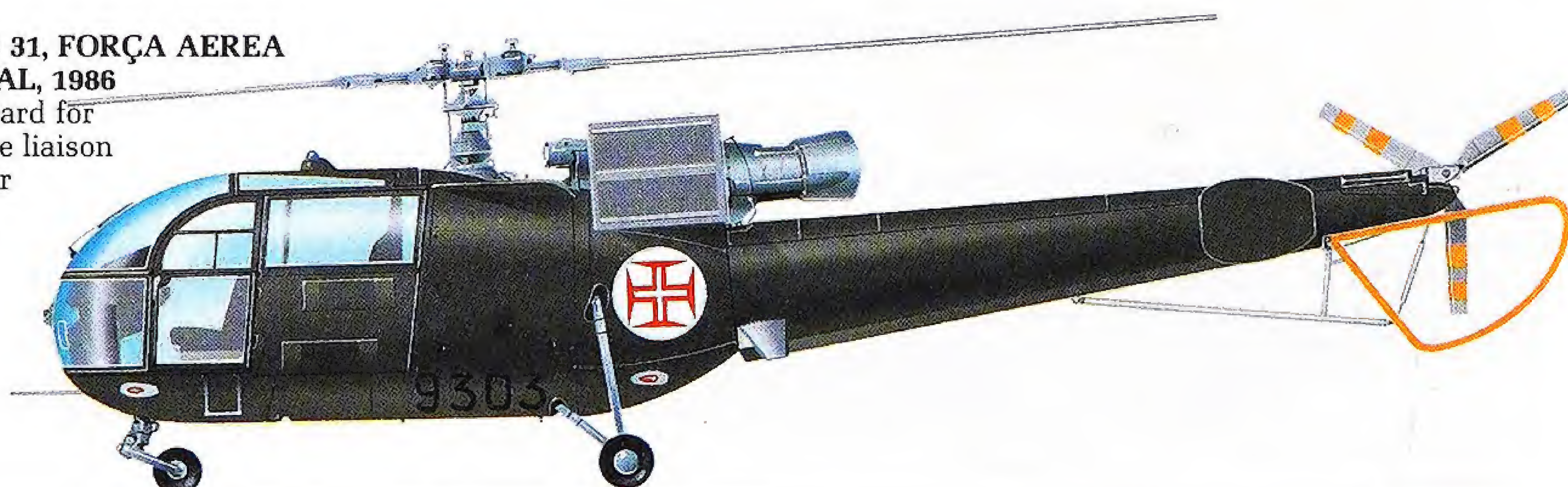
SA 316B, 7 SQUADRON, ROYAL JORDANIAN AIR FORCE, AMMAN, JORDAN, 1981

Before their withdrawal from use, 16 machines were operated by the RJAf, including this example, numbered 318, which had a special communications 'fit' on board. The national roundel incorporates the seven-pointed star representing the first seven verses of the Koran.



SA.316B, ESCUADRON 552, GRUPO 31, FORÇA AEREA PORTUGUESA, TANCÓS, PORTUGAL, 1986

Semi-matt dark green has been standard for the 25 or so machines operating in the liaison role. Helicopters in the Portuguese Air Force have numbers prefixed with 9.

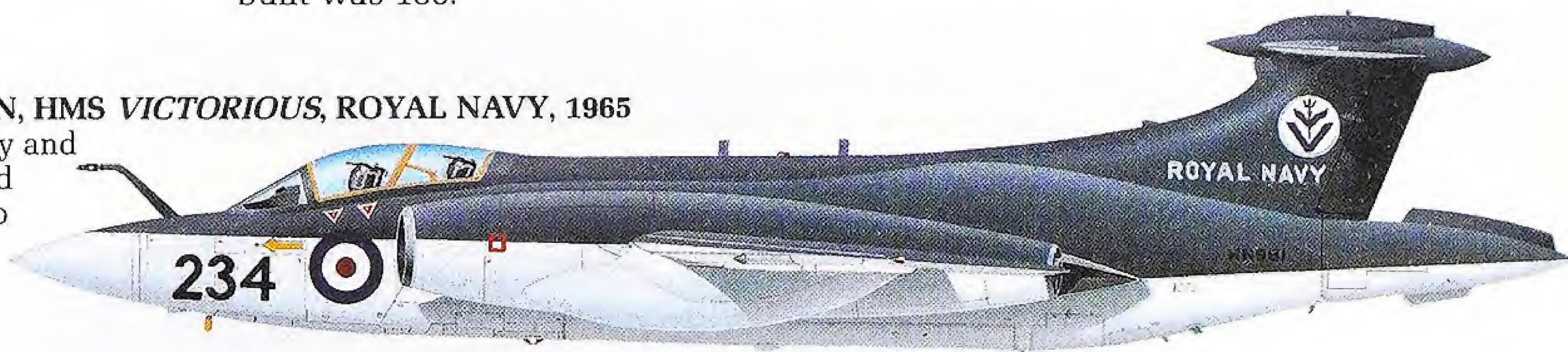


BLACKBURN BUCCANEER

Recognized as one of the world's finest low-level attack aircraft, the Buccaneer was originally designed by Blackburn as the B.103 to meet a Royal Navy specification NA39 (by which it was known before being named). The prototype flew in April 1958 and the slightly underpowered S1 joined HMS Ark Royal in early 1963. Two years later the longer-ranged S2 entered RN service. These were carrier-based until transferred to the RAF in 1979. In updated form, Buccaneers continue in RAF service in the maritime strike role. The survivors of 16 sold to South Africa as S.50s are also in use. Total built was 189.

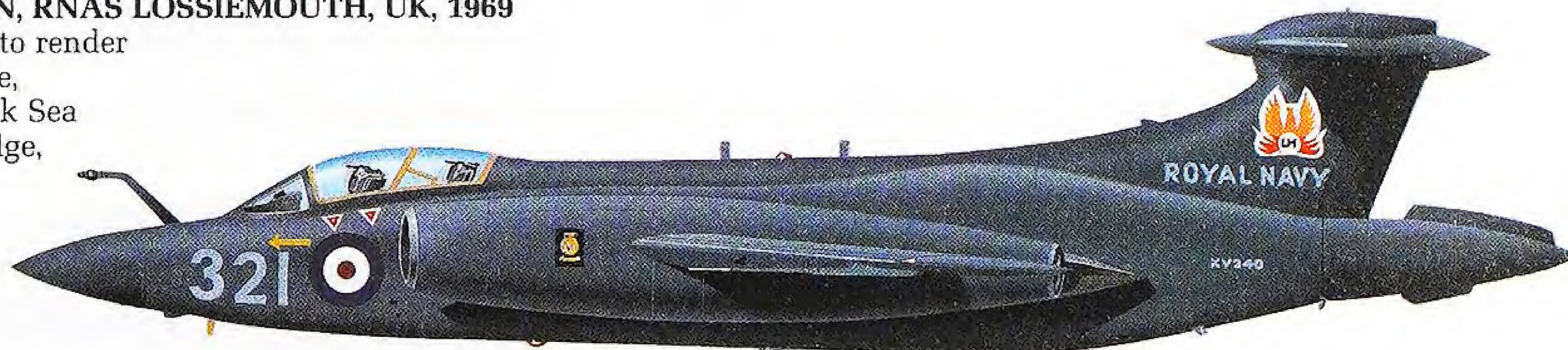
S Mk 2, 801 NAVAL AIR SQUADRON, HMS VICTORIOUS, ROYAL NAVY, 1965

Gloss-finished in Extra Dark Sea Gray and White, RN-operated aircraft were fitted with a "rhino horn" refueling probe to extend their range. Weapons were carried in the ventral rotating bomb bay.



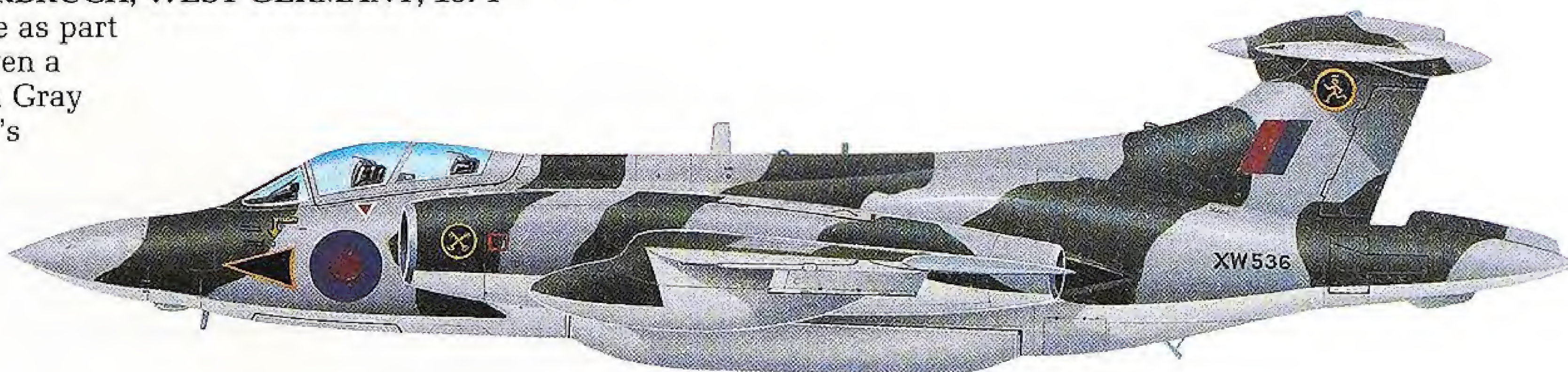
S Mk 2, 809 NAVAL AIR SQUADRON, RNAS LOSSIEMOUTH, UK, 1969

A change in coloring for Buccaneers, to render them less visible in their low-level role, produced this overall gloss Extra Dark Sea Gray finish. On the fin is the unit badge, repeated in heraldic form on the engine intake.



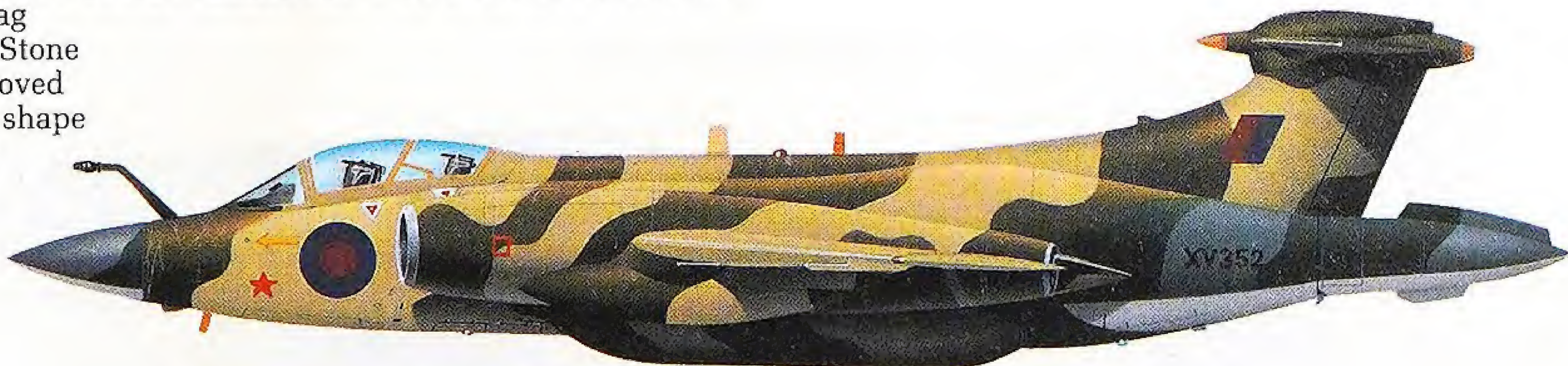
S Mk 2B, 16 SQUADRON, RAF LAARBRUCH, WEST GERMANY, 1974

Replacing Canberras in the strike role as part of RAF Germany, Buccaneers were given a scheme of matt Dark Green, Dark Sea Gray and Light Aircraft Gray, then the RAF's standard disruptive finish. A bulged bomb bay fuel tank was fitted to increase the range; the nose probe was removed.



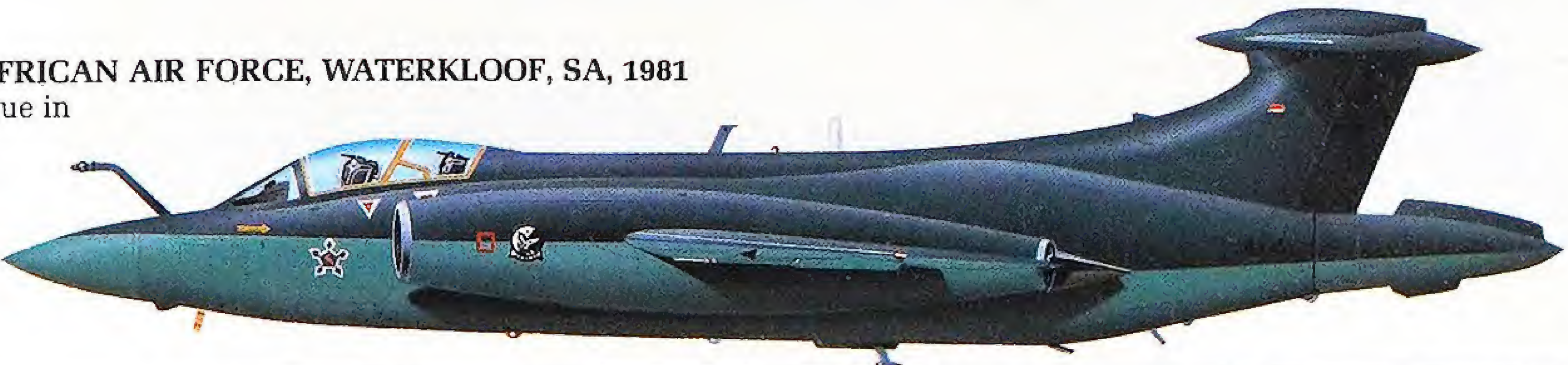
S Mk 2A, 208 SQUADRON, ROYAL AIR FORCE, NELLIS AIR FORCE BASE, USA, 1977

For participation in American Red Flag exercises, aircraft were given a Light Stone and Dark Earth camouflage which proved remarkably effective in merging their shape into the desert background. The rear fuselage area retained the European green/gray colors, as did the nose radome. The probe was retained on UK-based Bucs for the maritime strike role.



S Mk 50, 24 SQUADRON, SOUTH AFRICAN AIR FORCE, WATERKLOOF, SA, 1981

Only six aircraft of 16 ordered continue in SAAF use. A miniaturized national insignia has replaced the larger type originally applied. Gloss colors are Dark Sea Gray and PRU Blue undersides.

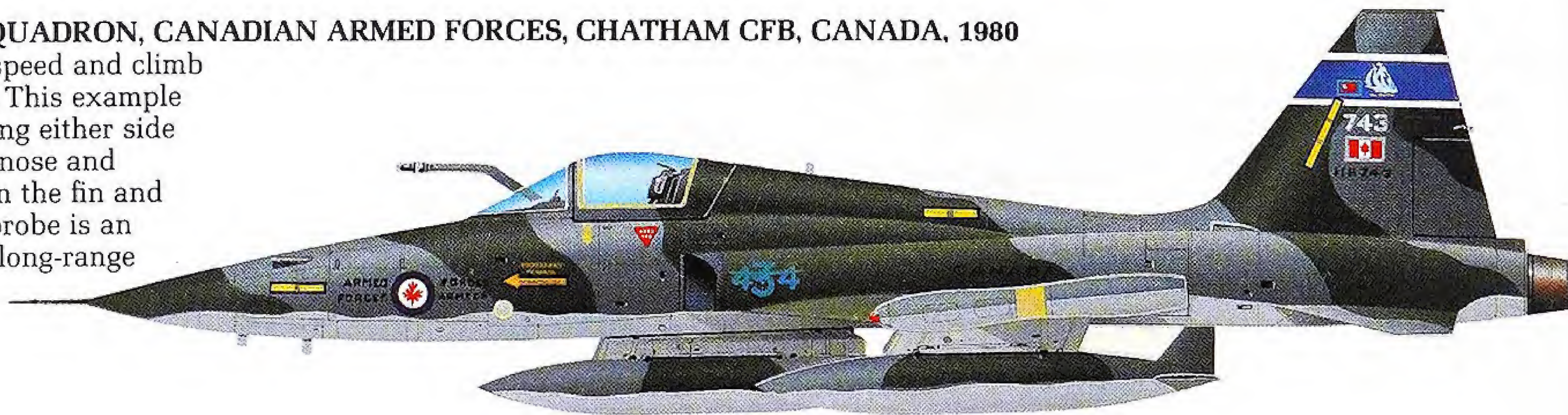


NORTHROP F-5

First flown on 30 July 1959, the N-156F was designed as a low-cost supersonic fighter. It carried about 485 gallons of fuel, two 20mm cannon and two Sidewinder missiles. Three years later the type entered production as the F-5 and over the next 20 years some 30 countries either bought, were given, or acquired examples of this small American combat aircraft. The early F-5A and two-seat F-5B gave way to the improved F-5E and F-5F from 1972 and there were also reconnaissance versions with nose-mounted cameras and sensors. Total production was 2610 of all versions.

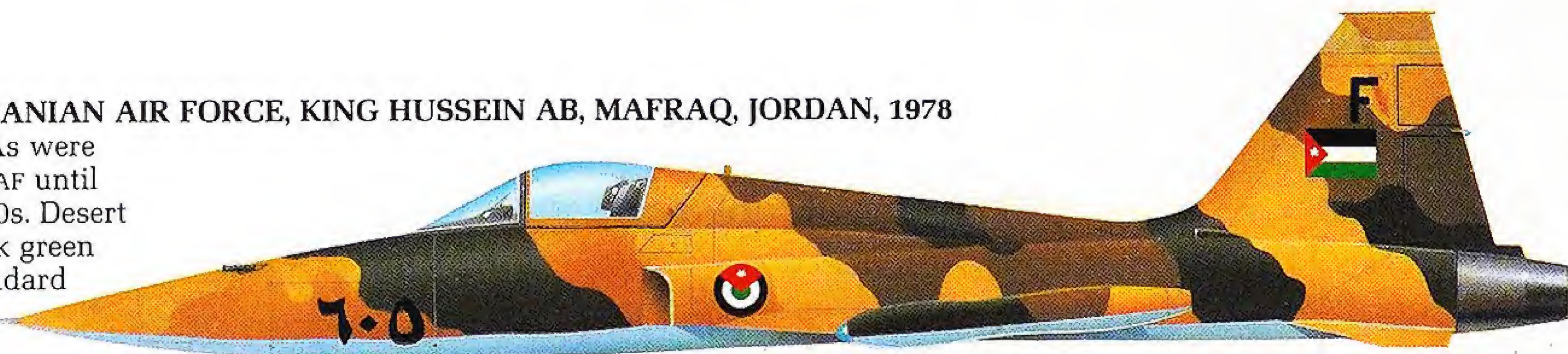
CF-5A/D, 434 "BLUENOSE" SQUADRON, CANADIAN ARMED FORCES, CHATHAM CFB, CANADA, 1980

Canadair-built CF-5As have a speed and climb rate superior to the basic F-5A. This example has the standard bi-lingual titling either side of the national marking on the nose and prominent squadron insignia on the fin and engine intakes. The refuelling probe is an optional fitting and is used for long-range deployments.



F-5A, 1 SQUADRON, ROYAL JORDANIAN AIR FORCE, KING HUSSEIN AB, MAFRAQ, JORDAN, 1978

Supplied by Iran from 1974, 30 F-5As were operational with two units of the RJAF until replaced by F-5Es from the mid 1980s. Desert camouflage of sand, brown and dark green with blue undersides forms the standard scheme for this country's fighters. The nose number is 605.



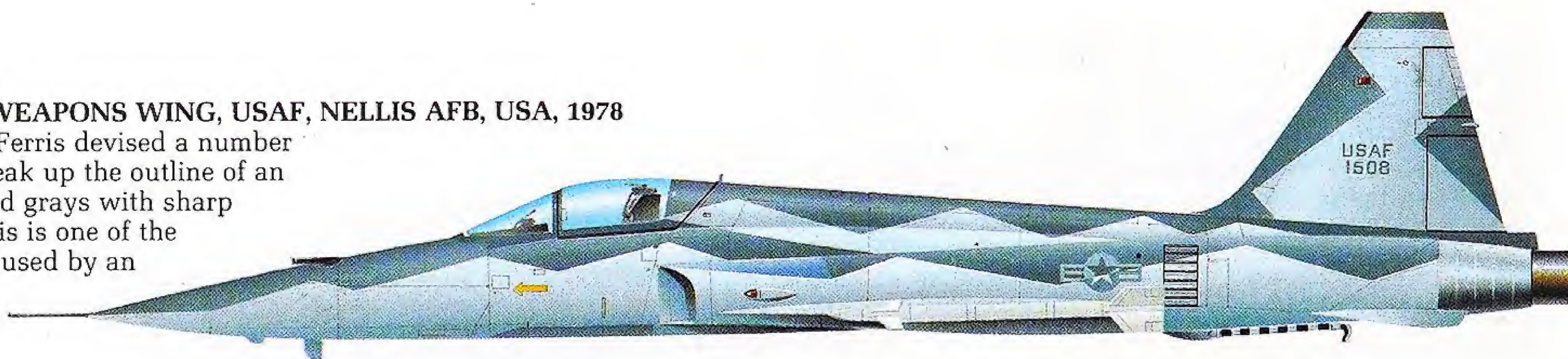
F-5E, 64th FITS, 57th FIGHTER WEAPONS WING, USAF, NELLIS AFB, USA, 1977

For Dissimilar Air Combat Training (DACT) the USAF painted their F5Es in camouflage schemes similar to those used by Soviet fighters. This is the "snake" scheme using green, brown and tan colors with the last two digits of the serial number painted on the nose. The unit badge is on the intake with the TAC badge on the fin.



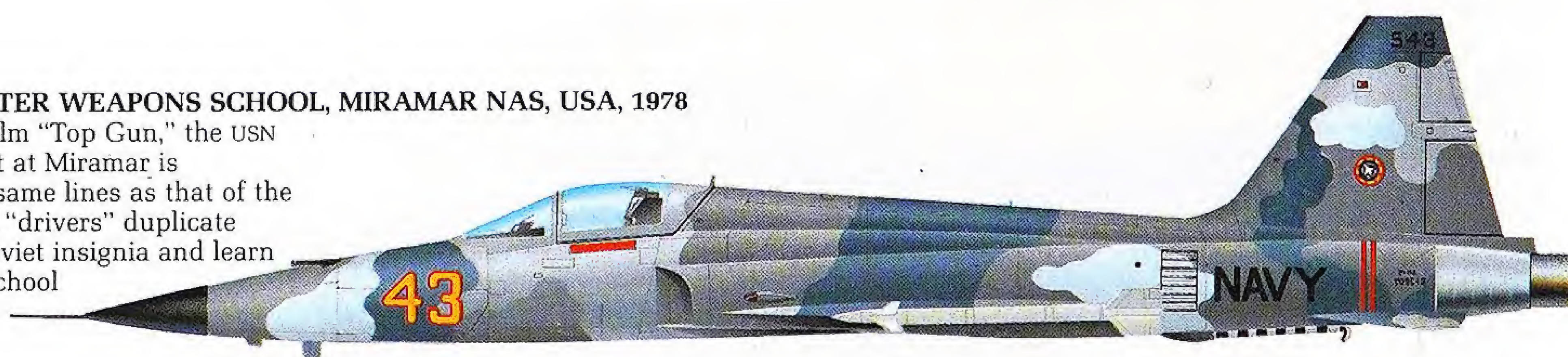
F-5E, 57th FIGHTER WEAPONS WING, USAF, NELLIS AFB, USA, 1978

American artist Keith Ferris devised a number of color schemes to break up the outline of an aircraft using blues and grays with sharp edges to the colors. This is one of the experimental schemes used by an "aggressor" training unit.



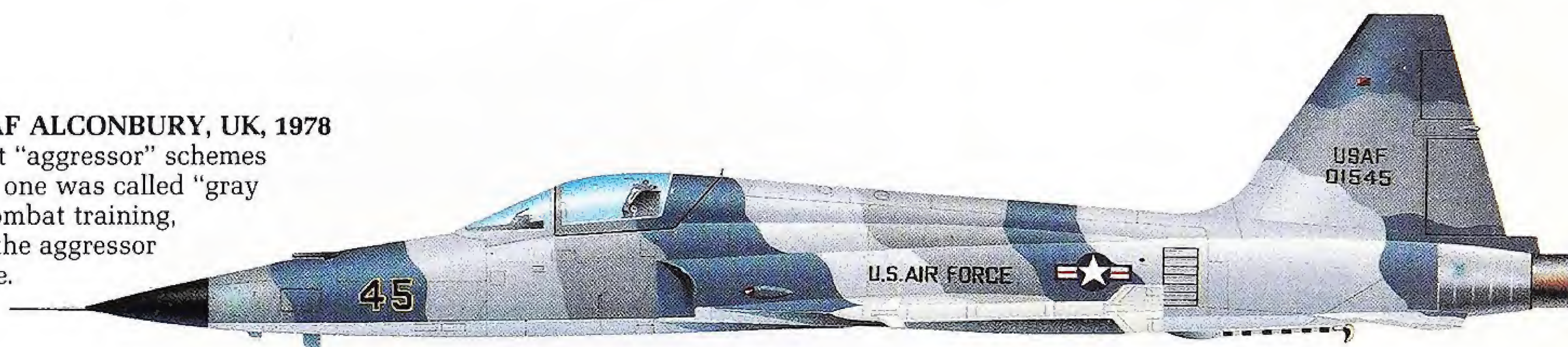
F-5E, US NAVY FIGHTER WEAPONS SCHOOL, MIRAMAR NAS, USA, 1978

Made famous by the film "Top Gun," the USN aggressor training unit at Miramar is established along the same lines as that of the USAF's units. The F-5E "drivers" duplicate Soviet tactics, wear Soviet insignia and learn Soviet doctrine. The School badge is located on the fin.



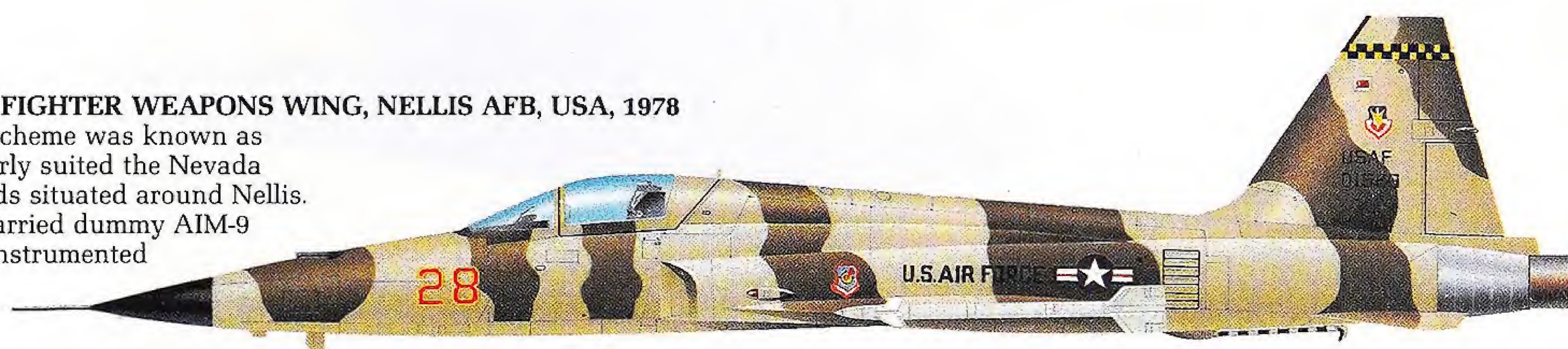
F-5E, 527th TFTAS, RAF ALCONBURY, UK, 1978

One of the five different "aggressor" schemes used by the 527th, this one was called "gray ghost." During mock combat training, opposing pilots found the aggressor F-5s very difficult to see.



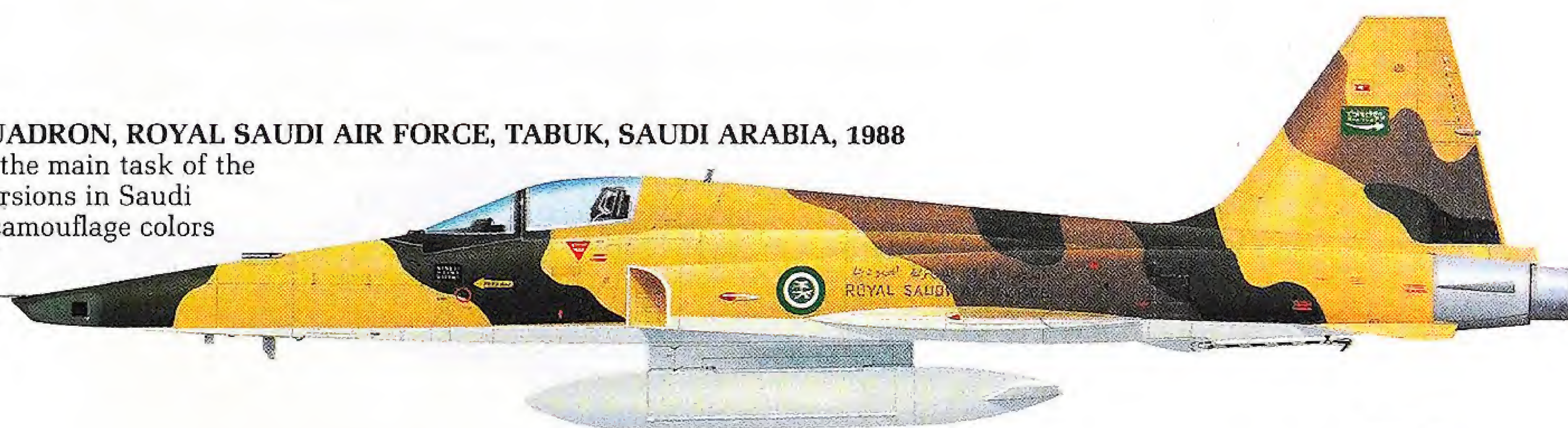
F-5E, 64th FITS, 57th FIGHTER WEAPONS WING, NELLIS AFB, USA, 1978

This brown and tan scheme was known as "lizard" and particularly suited the Nevada desert training grounds situated around Nellis. The wingtip pylons carried dummy AIM-9 Sidewinder missiles instrumented to record imaginary air-to-air kills.



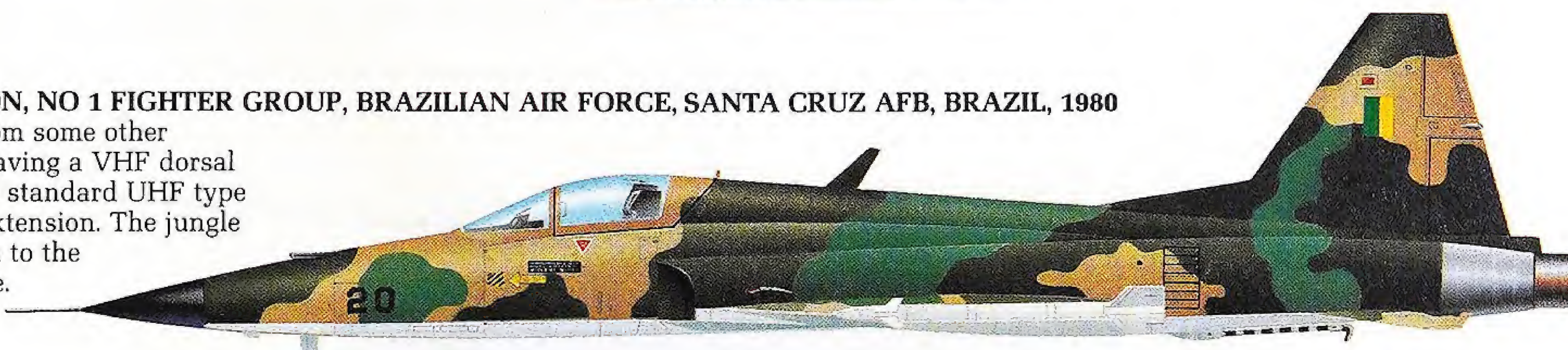
RF-5E TIGEREYE, 17 SQUADRON, ROYAL SAUDI AIR FORCE, TABUK, SAUDI ARABIA, 1988

Tactical reconnaissance is the main task of the ten specialized Tigereye versions in Saudi service. Disruptive desert camouflage colors appear to be standard on RSAF Tornados, F-5s, Strikemasters and Hawks.



F-5E, NO 1 SQUADRON, NO 1 FIGHTER GROUP, BRAZILIAN AIR FORCE, SANTA CRUZ AFB, BRAZIL, 1980

Brazilian F-5s differ from some other operator's aircraft in having a VHF dorsal antenna in place of the standard UHF type and also a dorsal fin extension. The jungle camouflage owes much to the USAF's Vietnam scheme.



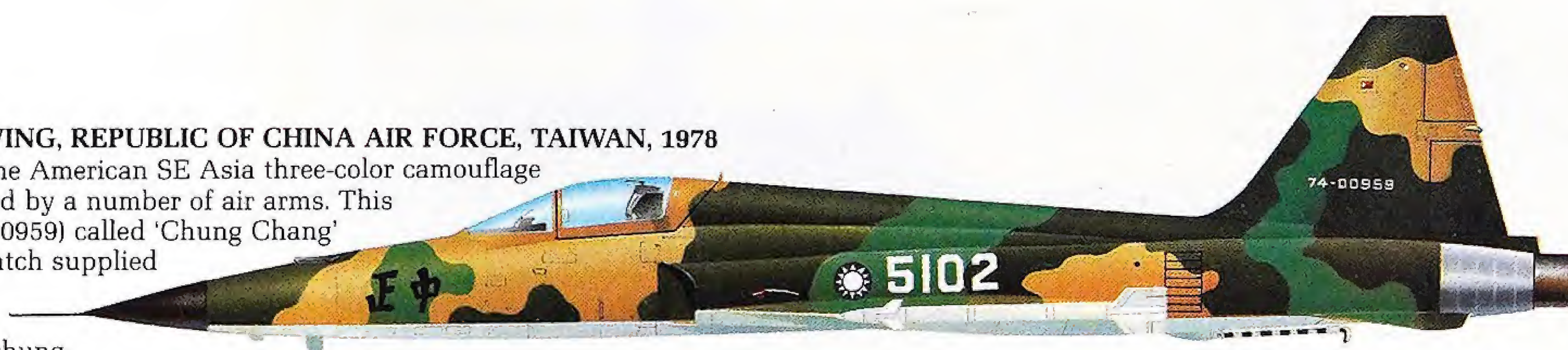
F-5E, MOROCCAN ROYAL AIR FORCE, 1987

Twenty aircraft were acquired by the Moroccan AF in 1981 and about 13 survive following combat operations against the Polisario guerrillas. The tail flash is a pentagram, or Solomon's Seal emblem, repeated with the addition of a crown in the circular marking.



F-5E, 2nd FIGHTER WING, REPUBLIC OF CHINA AIR FORCE, TAIWAN, 1978

Another variation on the American SE Asia three-color camouflage which has been adopted by a number of air arms. This particular aircraft (74-00959) called 'Chung Chang' was one of an initial batch supplied by Northrop; subsequent machines were assembled at Taichung.

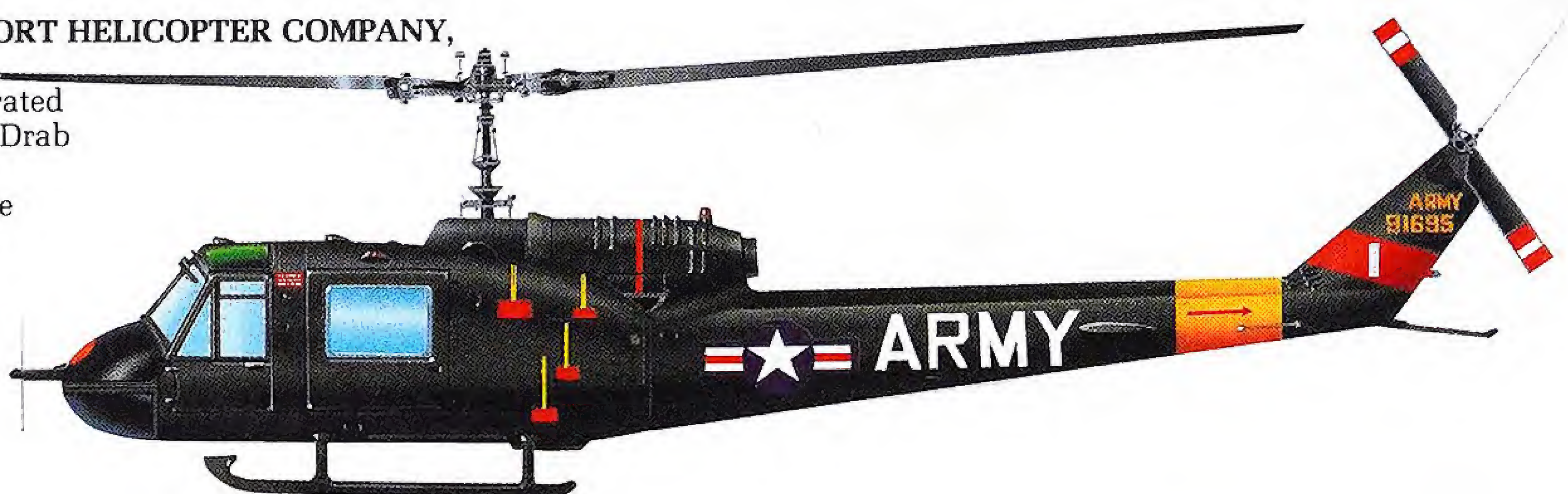


BELL IROQUOIS

Dubbed Huey, the UH-1 was the US forces' workhorse of the Vietnam War. It was the "cornerstone of airmobility" throughout the campaign, moving troops into battle, lifting them out, giving them fire-support, food and ammunition, and emitting that distinctive rotor beat which was music to the ears of the wounded GIs awaiting evacuation. The Huey also "made" the Bell company, which produced more than 20,000 from the first example delivered in 1959. Although the Sikorsky UH-60 is intended as its replacement, the ubiquitous UH-1 will be around until well into the 21st century.

UH-1A, UTILITY TACTICAL TRANSPORT HELICOPTER COMPANY, US ARMY, OKINAWA, 1961

The Platoon Leader of Red Platoon operated this early model Huey. Color was Olive Drab overall, with clearly marked hand-hold accesses on the rear cabin and a red line around the engine where the turbine is located.



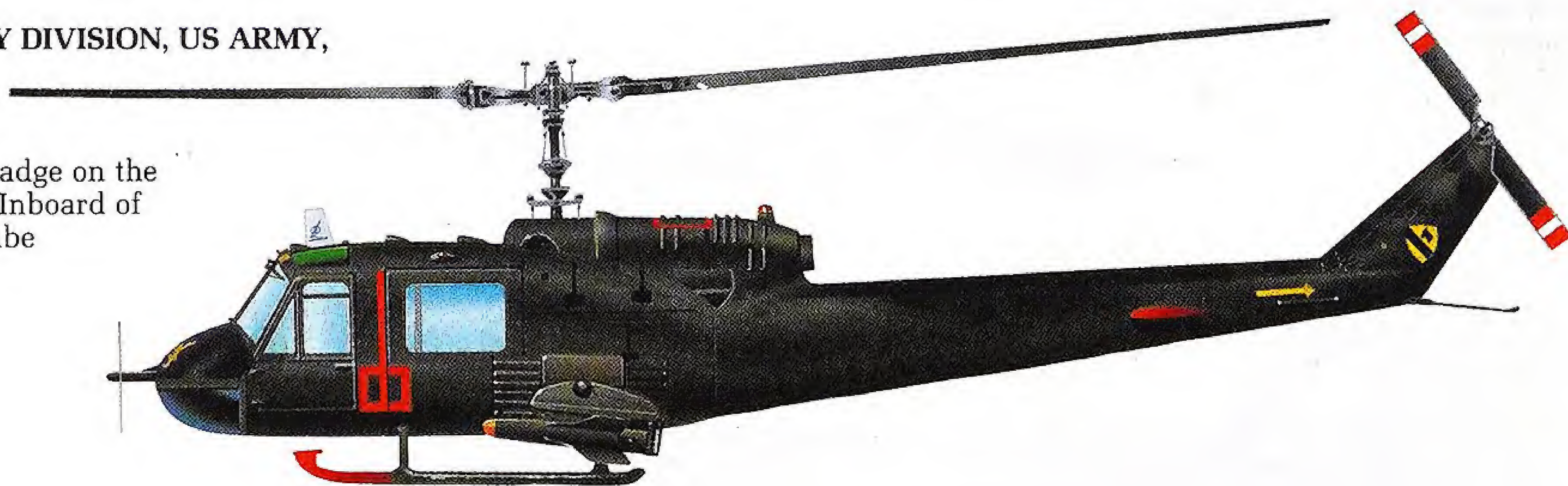
UH-1B, 121st ASSAULT HELICOPTER CO, 13th COMBAT AVN BATTALION, US ARMY, SOC TRANG, VIETNAM, 1967

"BLITZ-KRIEG" of the "Vikings" armed (gunship) platoon. The national insignia had been removed from US Army UH-1s by this time, leaving them dark and dull apart from crew embellishments or the tactical marks as shown on this example.



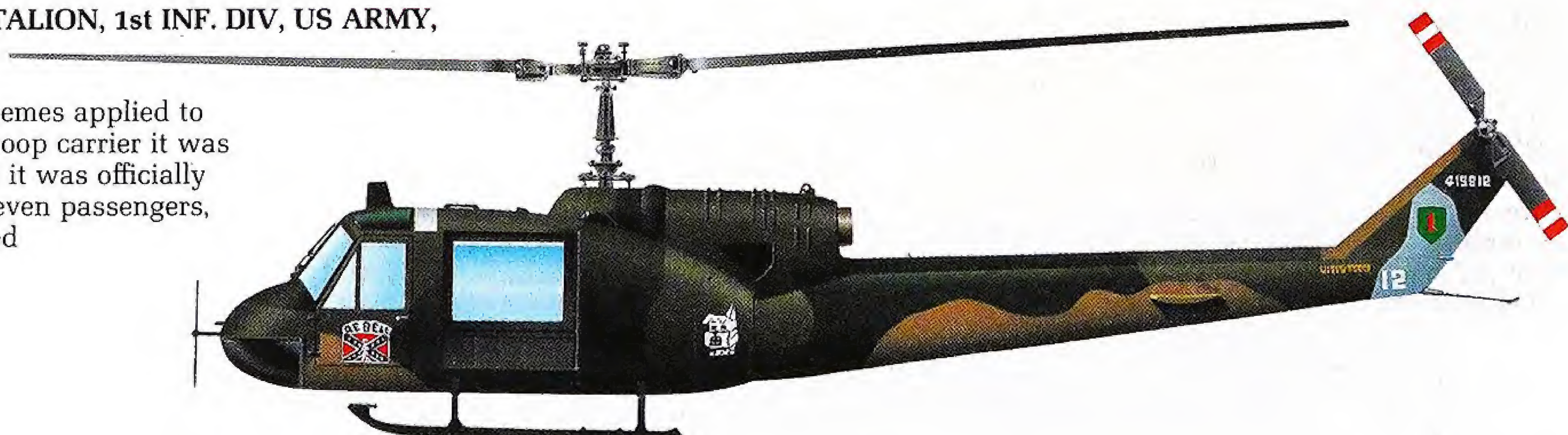
UH-1B, 2/20th ARA, 1st CAVALRY DIVISION, US ARMY, VIETNAM, 1967

Armed with a Nord SS11 (US M22) anti-tank missile and carrying the famous Air Cavalry badge on the tail, this is a B Battalion machine. Inboard of the missiles is an XM-3 24 or 36-tube rocket-launcher pack.



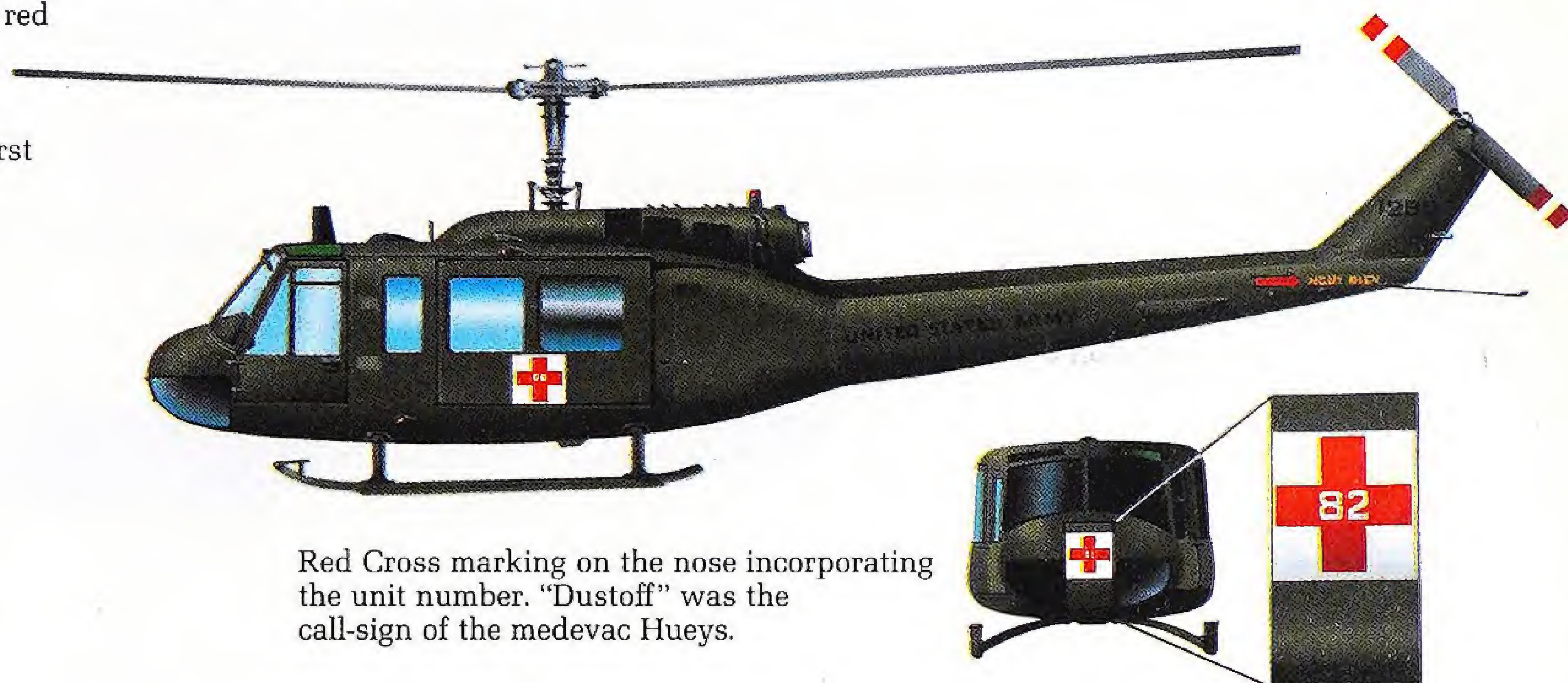
UH-1B, 1st AVIATION BATTALION, 1st INF. DIV, US ARMY, VIETNAM, 1967

One of a number of experimental camouflage schemes applied to Hueys in Vietnam. Being a troop carrier it was known as a "slick"; although it was officially capable of accommodating seven passengers, the B version regularly carried considerably more.



UH-1D, 82nd MEDICAL DETACHMENT, 121st ASSAULT HELICOPTER CO, US ARMY, SOC TRANG, VIETNAM, 1967

Clearly marked with the time-honored red cross marking, this was a special medevac machine with space for six stretchers in the cabin. When the newer "Deltas" and "Hotel" versions first arrived in Vietnam they were assigned to the medevac units.



Red Cross marking on the nose incorporating the unit number. "Dustoff" was the call-sign of the medevac Hueys.

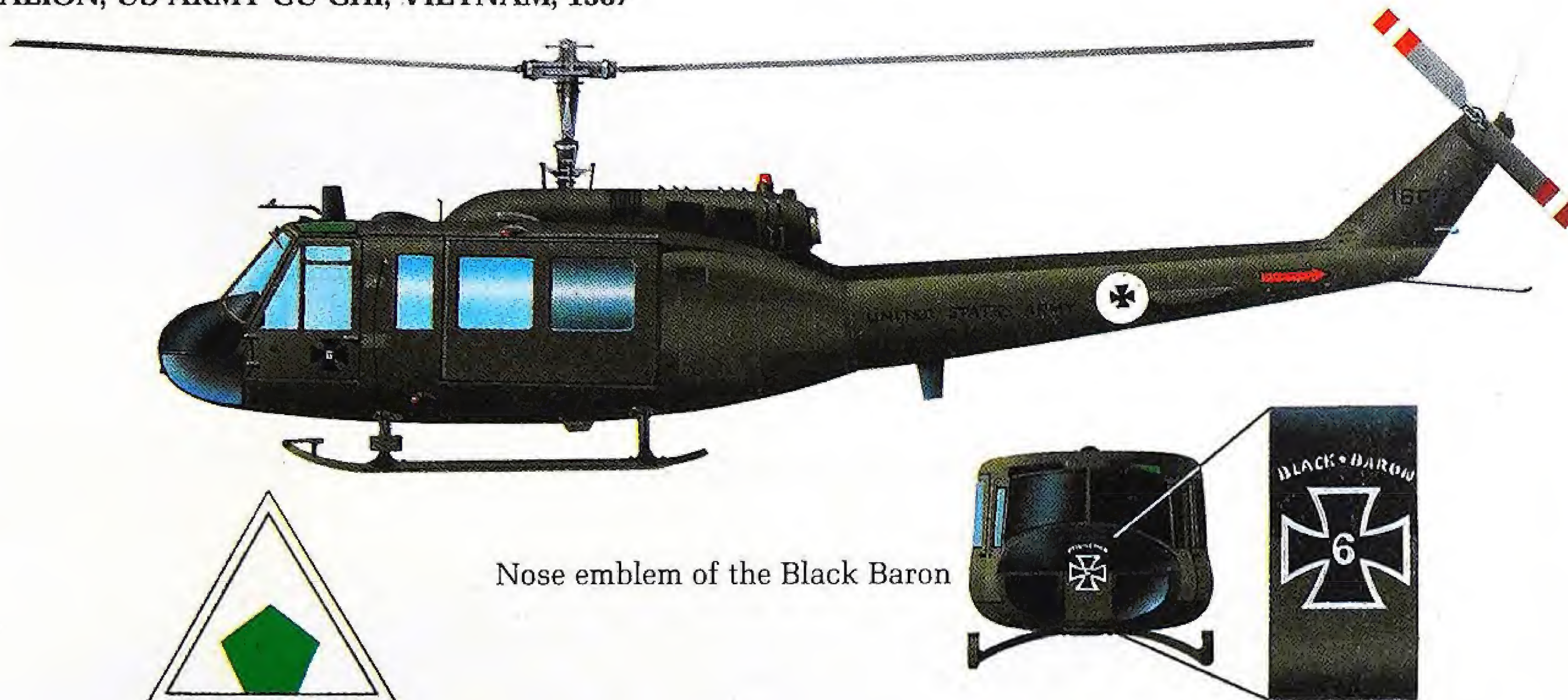
UH-1B, 1st LIFT PLATOON, 117th AVIATION CO (AIRMOBILE LIGHT), 52nd AVN BATTALION, US ARMY, QUI NHON, VIETNAM, 1964

Black and brown tiger-stripe finish on a basic "slick" in the early days of the US involvement in the war. In the doorway is a 7.62mm MG to give suppressive fire during the assault phase.



UH-1D/H, 269th COMBAT AVN BATTALION, US ARMY CU CHI, VIETNAM, 1967

Black Baron was the Battalion commander's command and control flight machine. In it he had a range of radio equipment with which he could direct air landing operations.



Nose emblem of the Black Baron

UH-1D, 3 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, HOBSONVILLE, NEW ZEALAND, 1980

First of five for the RNZAF, NZ3801 arrived in 1966 finished in the standard US Army scheme of overall Olive Drab with white serial numbers and the then official fern insignia. This was later replaced by the Kiwi marking, and in the mid 1970s the machine itself was repainted green.

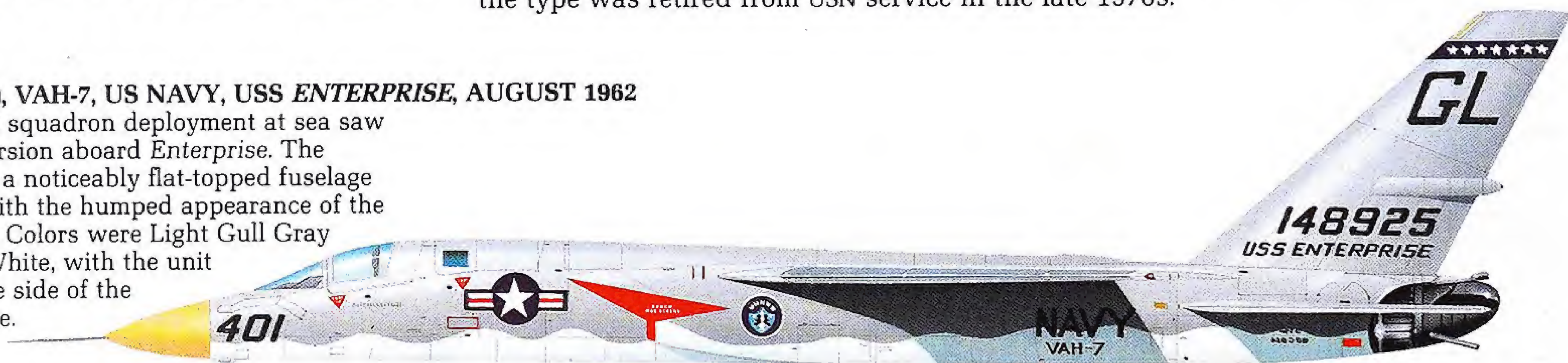


NORTH AMERICAN A-5

As a Mach 2 carrier-based strike aircraft, the Vigilante was not very successful. Its biggest problem, which remained unsolved, concerned the linear bomb-bay located in the center of the fuselage between the engines. This should have ejected a Mk 28 nuclear weapon rearwards, but it proved unreliable in a series of trials. Instead, 59 early production A-5As and Bs were converted to RA-5C multi-sensor recce aircraft and gave valuable service during the Vietnam war. Total production reached 156, and the type was retired from USN service in the late 1970s.

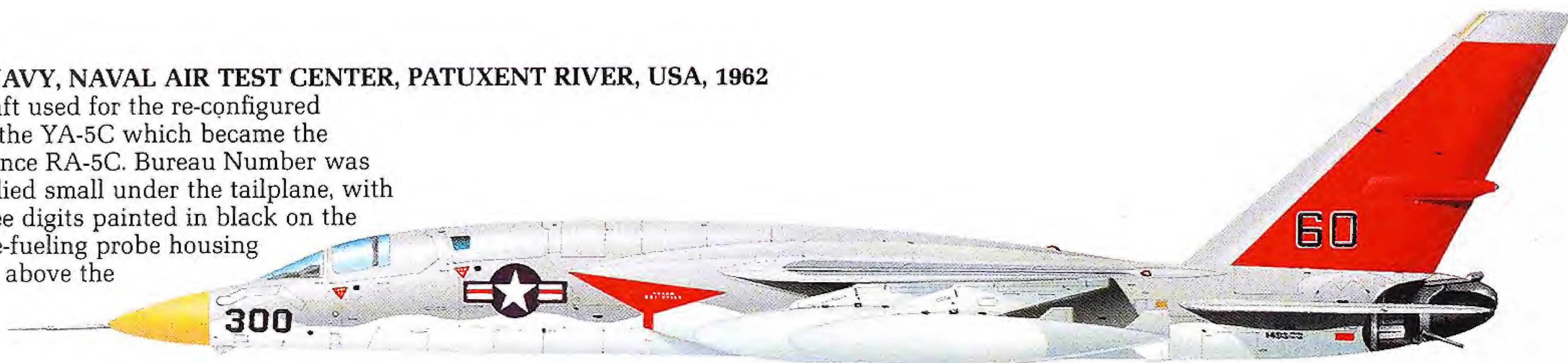
A3J-1 (A-5A), VAH-7, US NAVY, USS *ENTERPRISE*, AUGUST 1962

The first full squadron deployment at sea saw this early version aboard *Enterprise*. The bomber had a noticeably flat-topped fuselage compared with the humped appearance of the later RA-5C. Colors were Light Gull Gray and Gloss White, with the unit badge on the side of the engine intake.



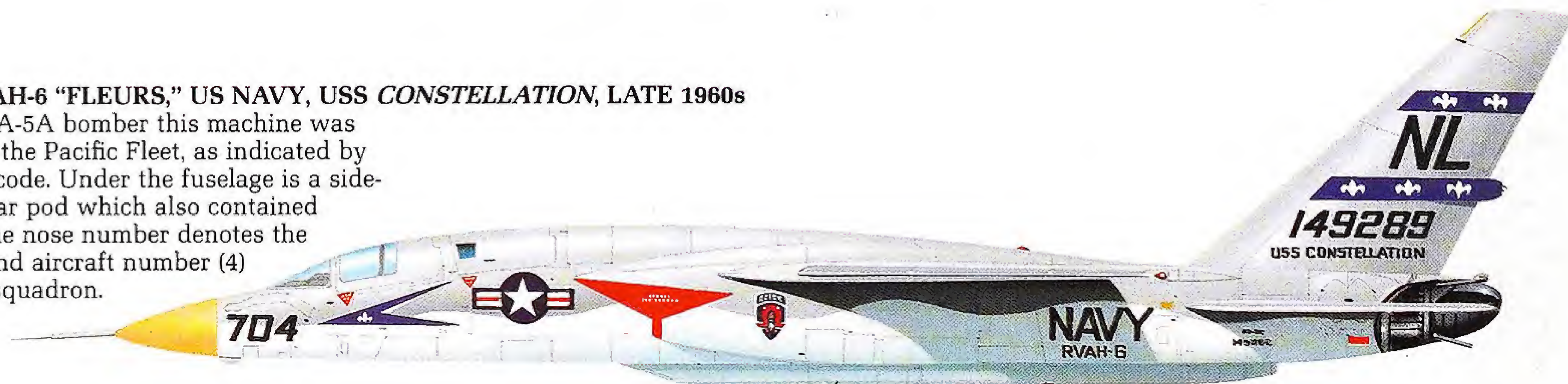
A3J-2, US NAVY, NAVAL AIR TEST CENTER, PATUXENT RIVER, USA, 1962

Trials aircraft used for the re-configured airframe of the YA-5C which became the reconnaissance RA-5C. Bureau Number was 149300 applied small under the tailplane, with the last three digits painted in black on the nose. The re-fueling probe housing can be seen above the number.



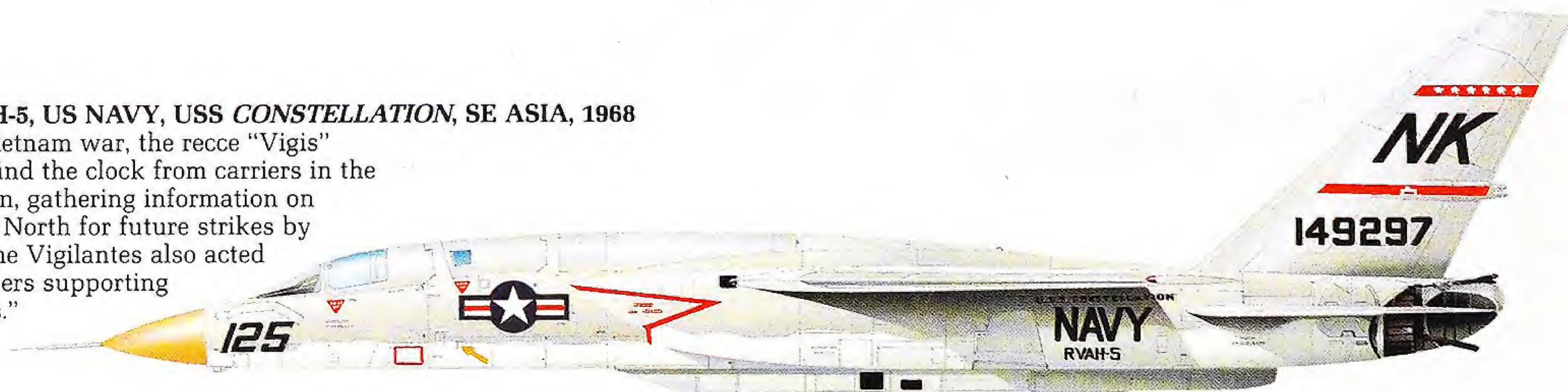
RA-5C, RVAH-6 "FLEURS," US NAVY, USS *CONSTELLATION*, LATE 1960s

Built as an A-5A bomber this machine was assigned to the Pacific Fleet, as indicated by the NL tail code. Under the fuselage is a side-looking radar pod which also contained cameras. The nose number denotes the squadron and aircraft number (4) within the squadron.



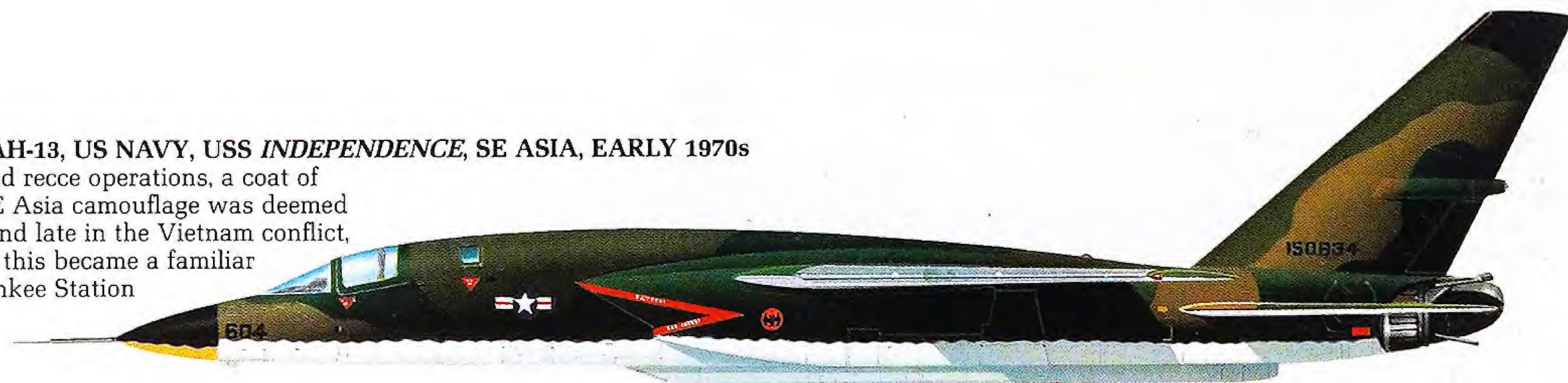
RA-5C, RVAH-5, US NAVY, USS *CONSTELLATION*, SE ASIA, 1968

During the Vietnam war, the recce "Vigis" operated around the clock from carriers in the Gulf of Tonkin, gathering information on targets in the North for future strikes by bombers. Some Vigilantes also acted as aerial tankers supporting the "snoopers."



RA-5C, RVAH-13, US NAVY, USS *INDEPENDENCE*, SE ASIA, EARLY 1970s

For over-land recce operations, a coat of standard SE Asia camouflage was deemed advisable, and late in the Vietnam conflict, aircraft like this became a familiar sight on Yankee Station in the Gulf.

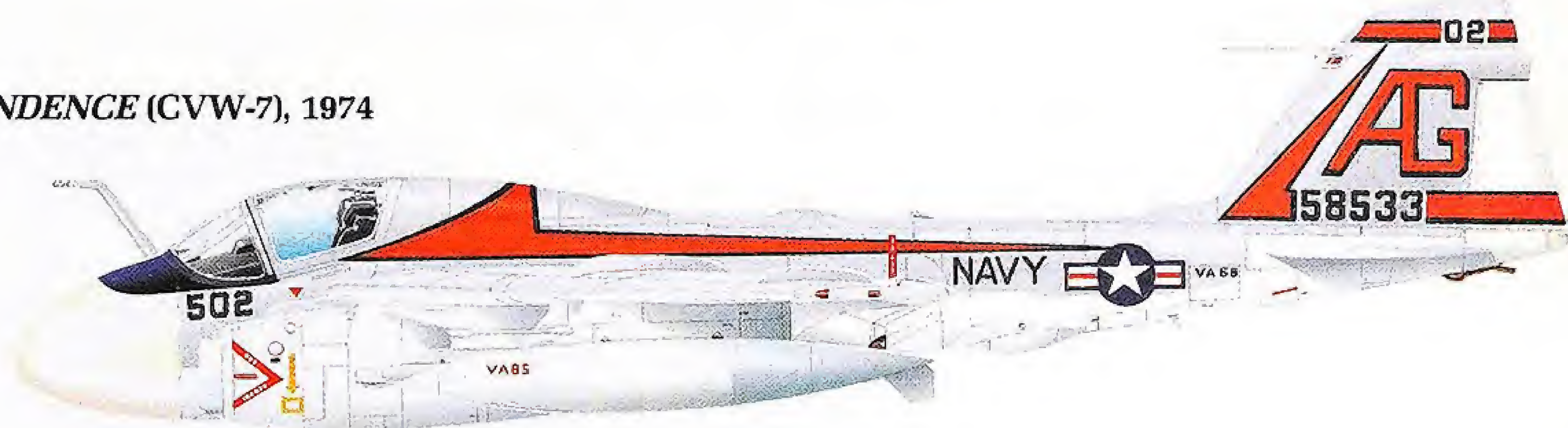


GRUMMAN A-6 INTRUDER

The tadpole-shaped Intruder has been a familiar sight on US Navy carriers since it entered service in the mid 1960s. An all-weather attack aircraft with a crew of two, the A-6 is capable of delivering 18,000lb of bombs over a 1000-mile range, a feat regularly demonstrated during the Vietnam war. From the basic A-6 design, Grumman developed the four-seat EA-6B Prowler electronic-warfare aircraft, the first of more than 149 flying in May 1968. Production of both types continues.

A-6E, VA-65 "TIGERS," US NAVY, USS *INDEPENDENCE* (CVW-7), 1974

Shown before the addition of the chin-mounted sensor turret known as TRAM (Target Recognition And Multi-sensor), which is on most E versions, this example is in the standard scheme of non-specular Light Gull Gray with Glossy White undersides. Bright unit markings were still part of the operational scene.



EA-6A, VMCJ-2, US MARINES, DA NANG, VIETNAM, 1972

Replacing the EF-10B Skyknight, this Intruder version provided tactical ECM for Marine strike operations in SE Asia. Unlike other A-6s, the EA-6A had no wingtip speed brakes, relying instead on one on each side of the rear fuselage for aerodynamic braking (seen here under the word "MARINES").



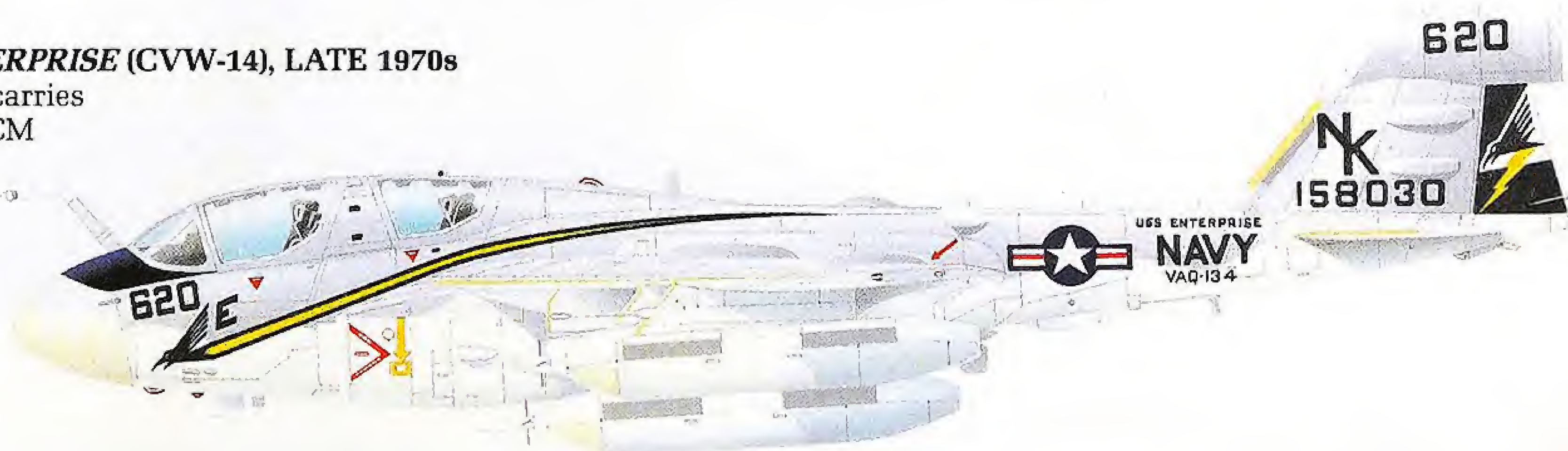
A-6E, VA-128, US NAVY, NAS WHIDBEY ISLAND, USA, MID 1980s

The low-visibility finish had really taken effect by this time and units were allowed to display their markings only in outline form, usually on the tail. This squadron was the Pacific Fleet replacement training unit. The grays used are 36320 (dark) on the upper surface and 36375 (light) on the undersides.



EA-6B, VAQ-134, US NAVY, USS *ENTERPRISE* (CVW-14), LATE 1970s

In the lengthened fuselage the Prowler carries a four-man crew which includes two ECM operators in the rear seats. Under the wings and belly are powerful jamming pods. The unusual "rhino-horn" in front of the cockpit is the aerial refuelling probe and is on all versions of the A-6.



EA-6B, VMAQ-2, US MARINES, MCAS EL TORO, USA, MID 1980s

The official low-visibility gray scheme for the Prowler uses three different shades, but they are hard to detect at more than a few yards, their merging into an overall tone being the object of the finish. Production of this aircraft in updated form is planned to continue until 1992.



SEPECAT JAGUAR

BAC in the UK and Dassault-Breguet in France jointly developed the Jaguar from separate requirements issued by the RAF and the French Air Force. Both single-seat all-weather attack and two-seat trainer versions were produced, the first aircraft flying on 8 September 1968. Each country ordered some 200 aircraft, and overseas sales have been made to India (where it is license-built), Ecuador, Nigeria and Oman. The Jaguar has seen combat with the French Air Force in Mauretania in 1977 and more recently in Chad. Total sales to date amount to 573 aircraft.

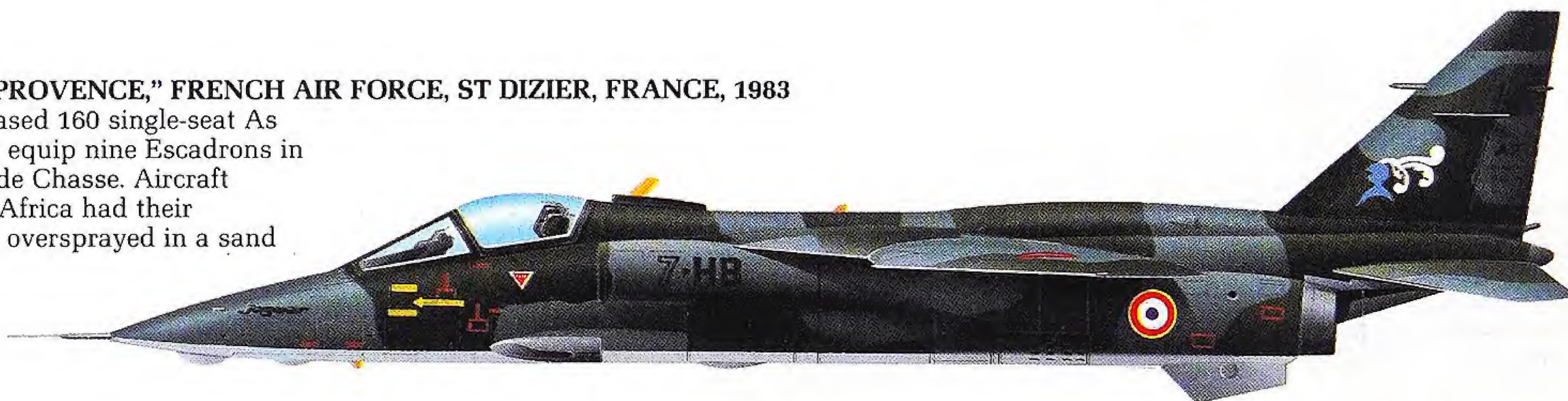
GR Mk 1, 14 SQUADRON, RAF BRÜGGEN, WEST GERMANY, 1984

The RAF received 202 Jaguars, almost all camouflaged in Dark Green and Dark Sea Gray. Low visibility national markings were somewhat compromised by the brightness of the squadron badge, but this would have been toned down or removed in wartime. Under the wing is a 264 Imp gal drop-tank.



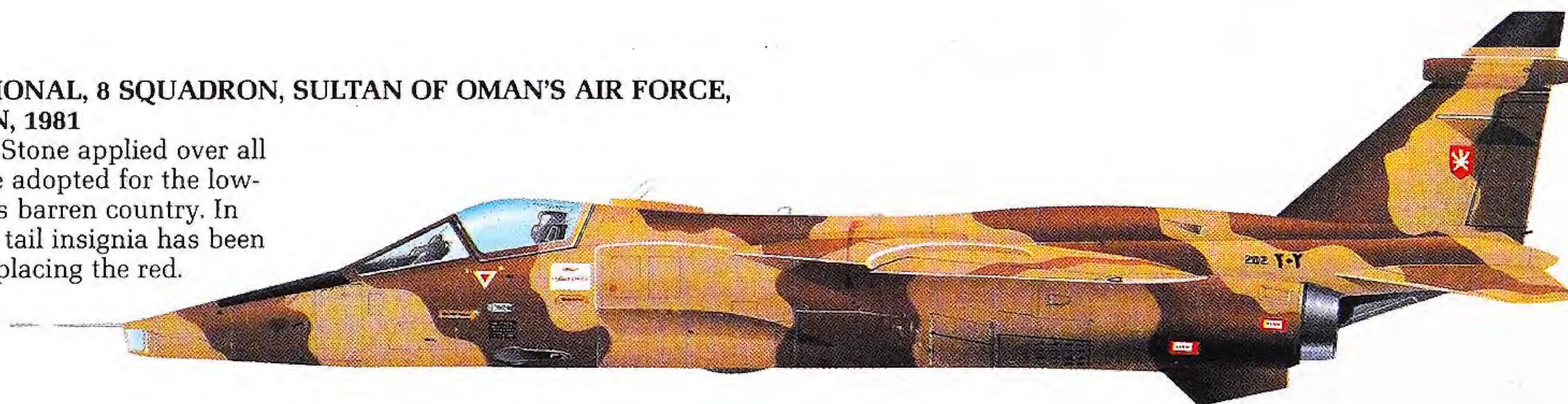
JAGUAR A, EC 1/7 "PROVENCE," FRENCH AIR FORCE, ST DIZIER, FRANCE, 1983

Armée de l'Air purchased 160 single-seat As and 40 two-seat Es to equip nine Escadrons in 3, 7 and 11 Escadres de Chasse. Aircraft deployed overseas to Africa had their European camouflage oversprayed in a sand and stone coloring.



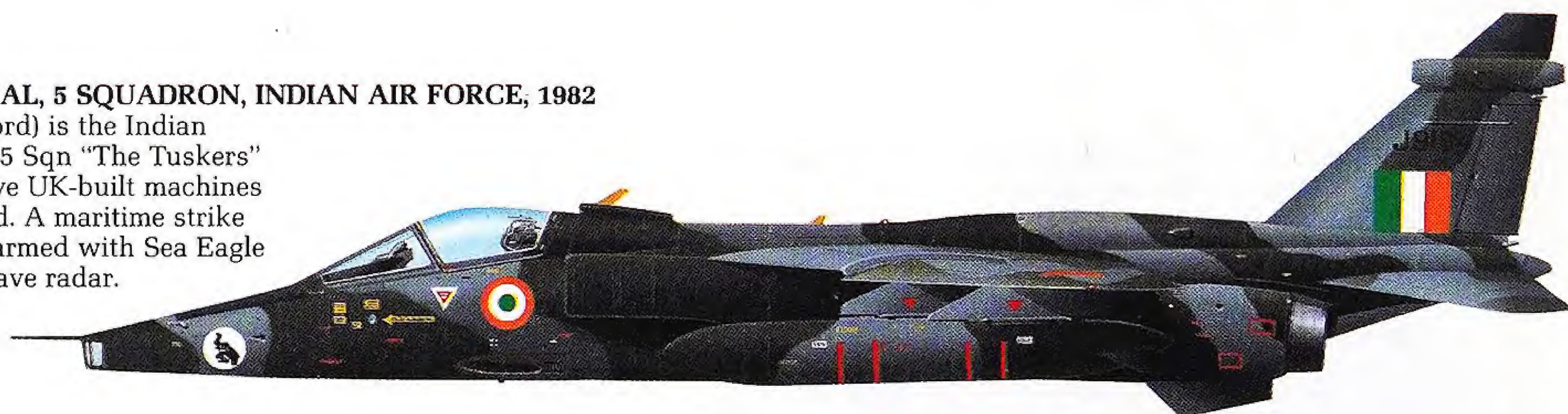
JAGUAR INTERNATIONAL, 8 SQUADRON, SULTAN OF OMAN'S AIR FORCE, THRUMRAYT, OMAN, 1981

Dark Earth and Light Stone applied over all surfaces is the scheme adopted for the low-level attack role in this barren country. In recent years the small tail insignia has been changed, with blue replacing the red.



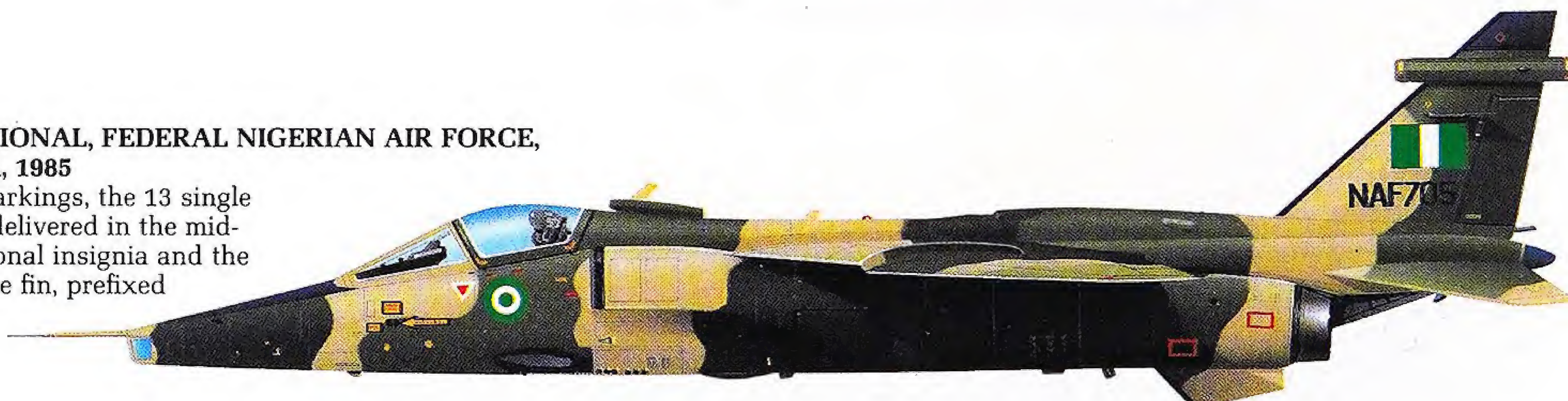
JAGUAR INTERNATIONAL, 5 SQUADRON, INDIAN AIR FORCE, 1982

Shemsher (an assault sword) is the Indian name for the aircraft and 5 Sqn "The Tuskers" was the first unit to receive UK-built machines to the full Indian standard. A maritime strike version is also in service armed with Sea Eagle missiles and a French Agave radar.



JAGUAR INTERNATIONAL, FEDERAL NIGERIAN AIR FORCE, MAKURDI, NIGERIA, 1985

Devoid of any unit markings, the 13 single and five two-seaters delivered in the mid-1980s carry only national insignia and the aircraft number on the fin, prefixed with the Air Force abbreviation.



M-B-B BO105

Armed with six HOT or eight TOW anti-tank missiles, the small BO105 can be a deadly opponent to enemy armor. Initially developed for the civil market, this Messerschmitt-Bolkow-Blohm design found favor with the West German Army in its BO105M form for liaison and comms duties. The later BO105P with uprated transmission and improved rotors was selected for A-T use. Other operators include Indonesia (where it is built under license), Iraq, the Netherlands, Spain and Sweden (designated HKP 9A). Military production exceeds 650.

BO105P, WEST GERMAN ARMY AVIATION, 1985

Three Panzerabwehrregiments home-based at Celle, Roth and Fritzlar are equipped with the anti-tank version of the BO105. Each of the 212 machines can carry six HOT wire-guided missiles, the gunner using a roof-mounted sight to acquire the targets.



BO105GSH, BATTALION DE HELICOPTEROS DE ATAQUE I, SPANISH ARMY AVIATION, SPAIN, 1986

Assembled in Spain by CASA, the BO105 operates with the Army in three main roles, anti-tank (Spanish designation HA.15), reconnaissance (HR.15) and attack with a 20mm cannon installation under the fuselage (also HR.15).



BO105CBS, F6 WING, SWEDISH AIR FORCE, KARLSBORG, SWEDEN, 1986

Four examples are in service for search and rescue duties, two with F6 Wing shown here and two with F7 at Satenas, hence the orange high-visibility areas on the fuselage and tail unit. Swedish type designation is HKP 9B.



BO105CBS, FUERZA AEREA DE CHILE, 1986

The first of some 30 machines for the FACH was delivered early in 1986. Assembly is being undertaken in Santiago by ENAER. The bright paint scheme using the Chilean national colors indicates a VIP/Government machine bearing the standard H = helicopter prefix used on FACH rotary-wing craft.



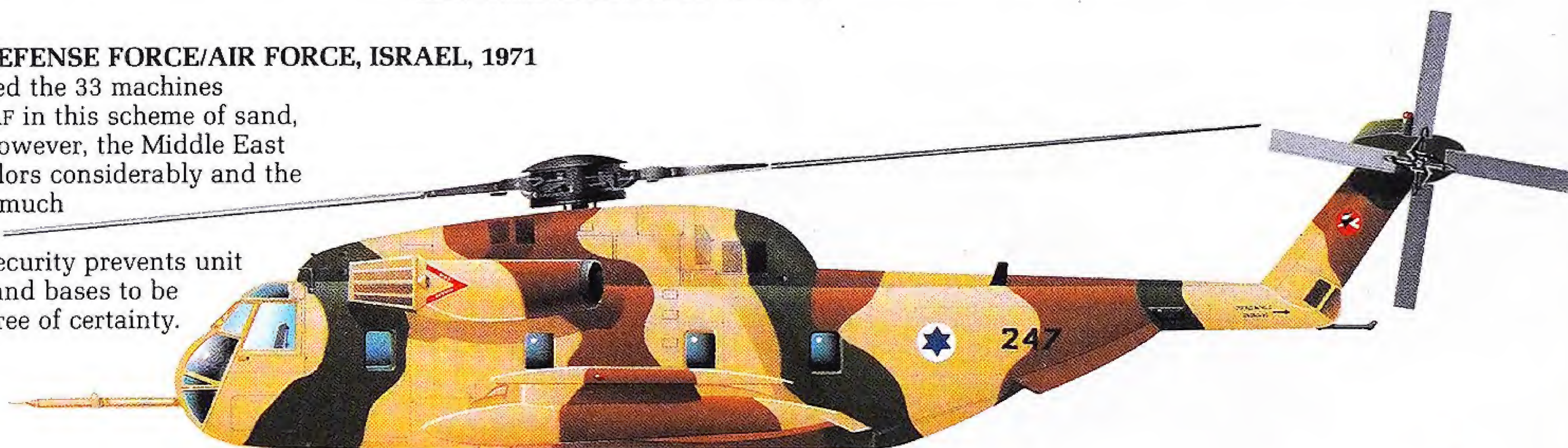
SIKORSKY CH-53/S-65

Together with the Chinook, the largest Western helicopter in service, the CH-53 is best remembered for its rescue and recovery operations during the Vietnam war. Less successful was its involvement in the abortive Iranian hostage rescue mission in April 1980. The first CH-53 flew in October 1964 and entered US Marine service on 20 September 1966. Subsequent versions included the HH-53B/C (USAF) CH-53D (USMC), the three-engined CH-53E (USMC, USN), CH-53G (W German Army) and the specialized mine-countermeasures MH-53E.

S-65C-3, ISRAELI DEFENSE FORCE/AIR FORCE, ISRAEL, 1971

Sikorsky camouflaged the 33 machines supplied to the IDF/AF in this scheme of sand, brown and green. However, the Middle East climate faded the colors considerably and the machines took on a much lighter finish.

Continuing Israeli security prevents unit badges, squadrons and bases to be stated with any degree of certainty.



CH-53G, MHFTR-35, III KORPS, W GERMAN ARMY, NIEDERMENDIG, W GERMANY, 1980

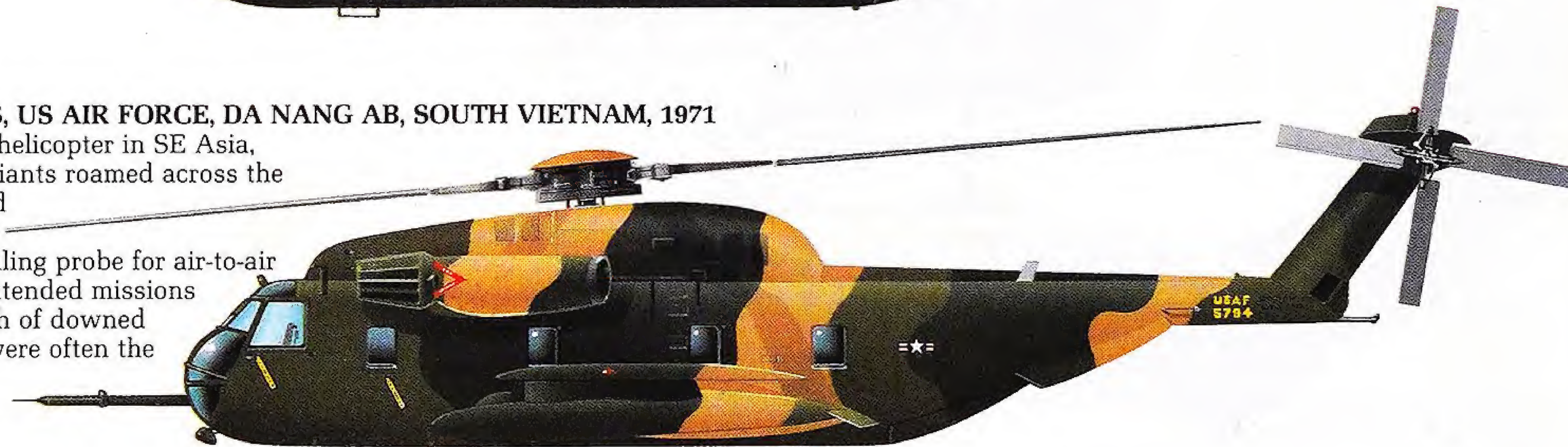
Dark olive green overall, Heersflieger CH-53Gs carry a four-digit code ranging between 8401 and 8512, making this example the 66th machine of 112 purchased. Three Regiments operate the type, one attached to each Army Corps.



HH-53C, 37th ARRS, US AIR FORCE, DA NANG AB, SOUTH VIETNAM, 1971

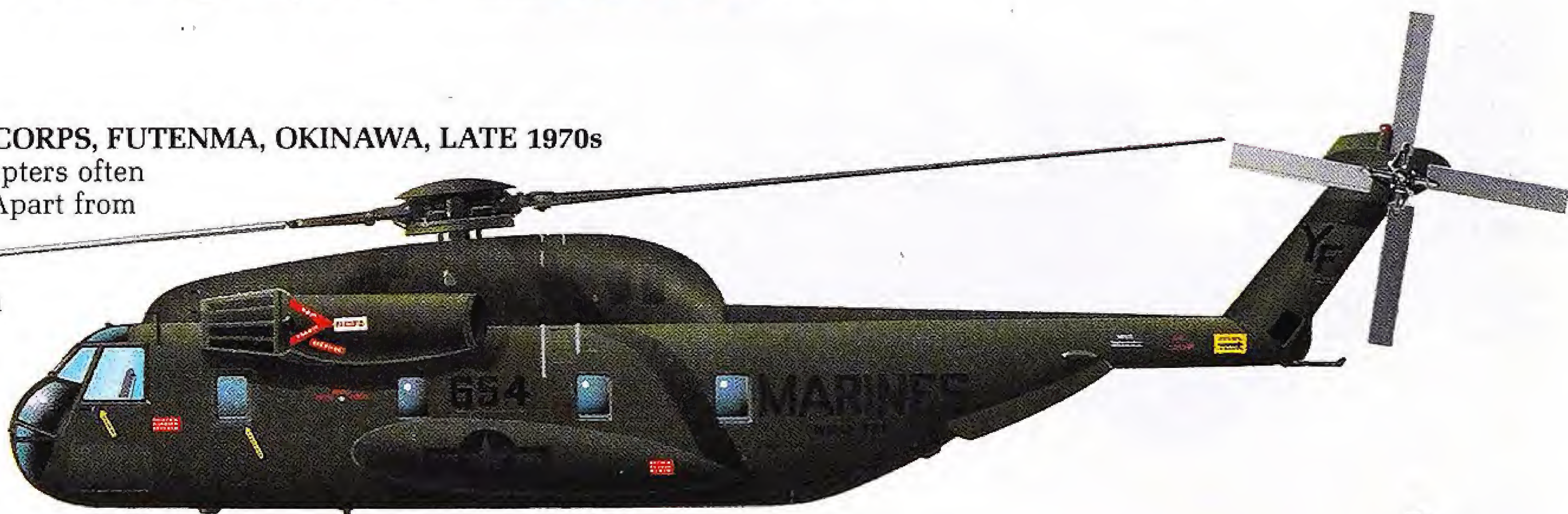
The premier rescue helicopter in SE Asia, Super Jolly Green Giants roamed across the jungles of North and South Vietnam.

The long nose refuelling probe for air-to-air refueling allowed extended missions to be flown in search of downed aircrew. Miniguns were often the only defensive armament for these large machines.



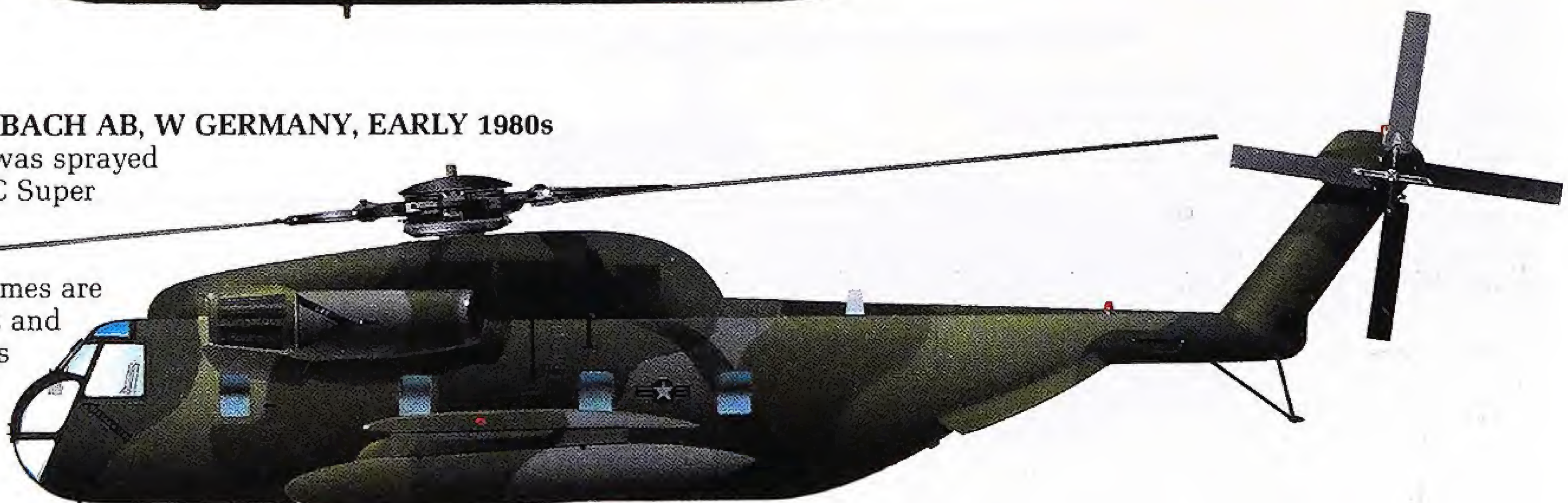
CH-53D, HMH-462, US MARINE CORPS, FUTENMA, OKINAWA, LATE 1970s

Dark olive drab made these helicopters often appear almost black in daylight. Apart from the rescue and warning markings, all other insignia was applied in black. Sea Stallion is the official name of Marine-operated CH-53A/Ds.



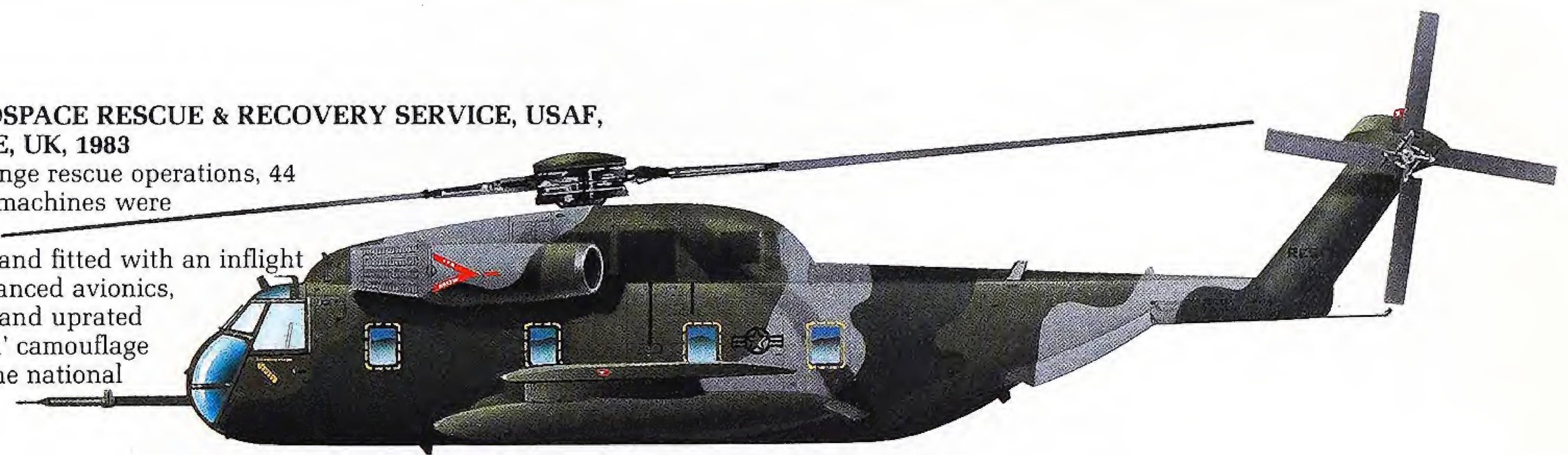
CH-53C, 601st TASS, USAF, SEMBACH AB, W GERMANY, EARLY 1980s

'European 1' camouflage pattern was sprayed on the small force of USAF CH-53C Super Jollies based in W Germany and New Mexico, USA. Official Tech Order color names are Gunship Greens 34092 and 34102 and Gunship Gray 36118, the numbers relating to the Federal Standard 595a list.



HH-53C, 67th AEROSPACE RESCUE & RECOVERY SERVICE, USAF, RAF WOODBRIDGE, UK, 1983

Designed for long-range rescue operations, 44 of these specialized machines were built, each protected by armor, and fitted with an inflight refueling probe, advanced avionics, auxiliary fuel tanks and uprated engines. 'European 1' camouflage includes black outline national markings.



RH-53D, HM-12, US NAVY, NAS NORFOLK, USA, 1975

The tremendous power of the H-53 prompted the USN to order a minesweeping version, the RH-53A. The later D variant, of which 30 were built, succeeded it and HM-12 was the first Helicopter Mine Countermeasures Squadron. The structure under the rear fuselage is used to tow the mine sweep gear.



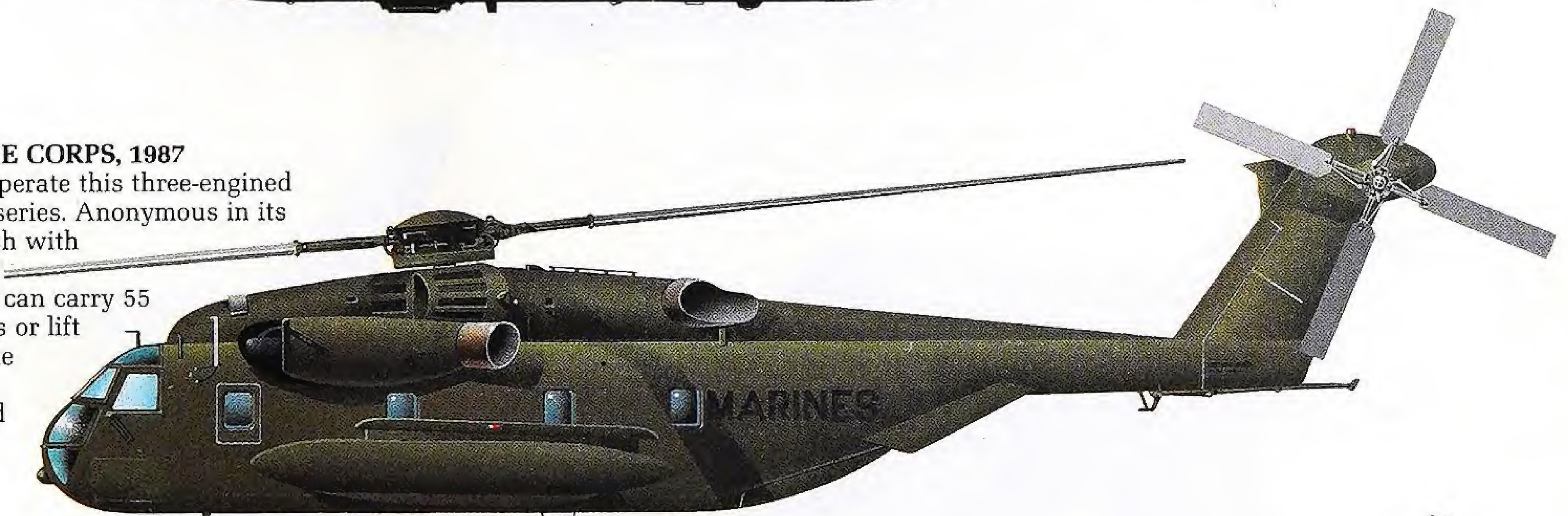
MH-53H, 1st SPECIAL OPERATIONS WING, USAF, HURLBURT FIELD, USA, 1987

Night and adverse weather operations called for this modification of the HH-53C. Equipment includes Forward-Looking Infra-Red, Doppler navigation system and, in the nose thimble, radar taken from the A-7D Corsair II.



CH-53E, US MARINE CORPS, 1987

Four Marine units operate this three-engined version of the H-53 series. Anonymous in its dark olive drab finish with no insignia readily apparent, this giant can carry 55 combat-ready troops or lift most types of Marine artillery as well as downed aircraft and helicopters.



CH-53E, HC-1, US NAVY, NORTH ISLAND, CALIF, 1985

USN Super Stallions adopted this very dark gray finish principally for night operations although it is also effective coloring against the sea. All markings appear pale blue with just the machine number (441) in white. The external fuel tanks on the E version each carry 650 US gal.

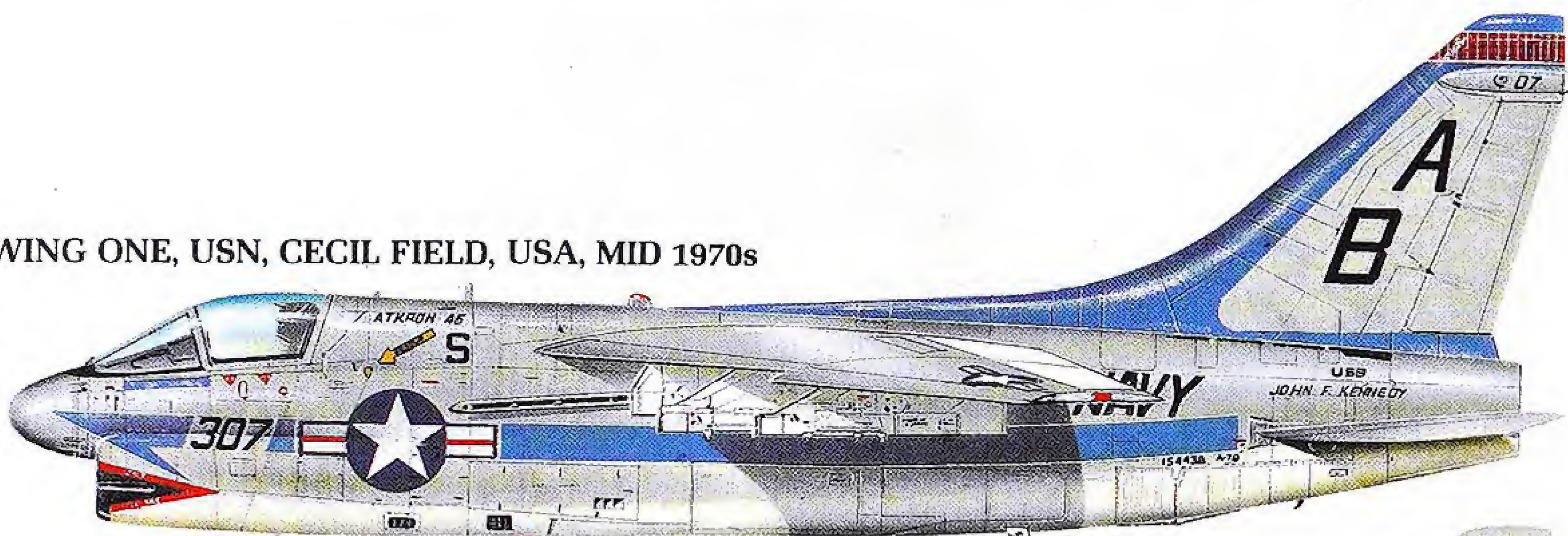


VOUGHT A-7 CORSAIR II

This light tactical attack aircraft owes its ancestry to the Company's earlier F-8 Crusader. However, the Corsair is smaller and shorter than its fighting parent. The prototype flew on 27 September 1965 and delivery of A-7As to the USN began the following year. The improved A-7B arrived with units in 1968 only to be replaced by the updated A-7E powered by a license-built Rolls-Royce Spey turbofan. This continues to serve with the US Navy. The USAF operated the D version in Vietnam and also has A-7Ks for two-seat combat training. Greece and Portugal received A-7Hs and A-7Ps respectively. Production totaled 1545.

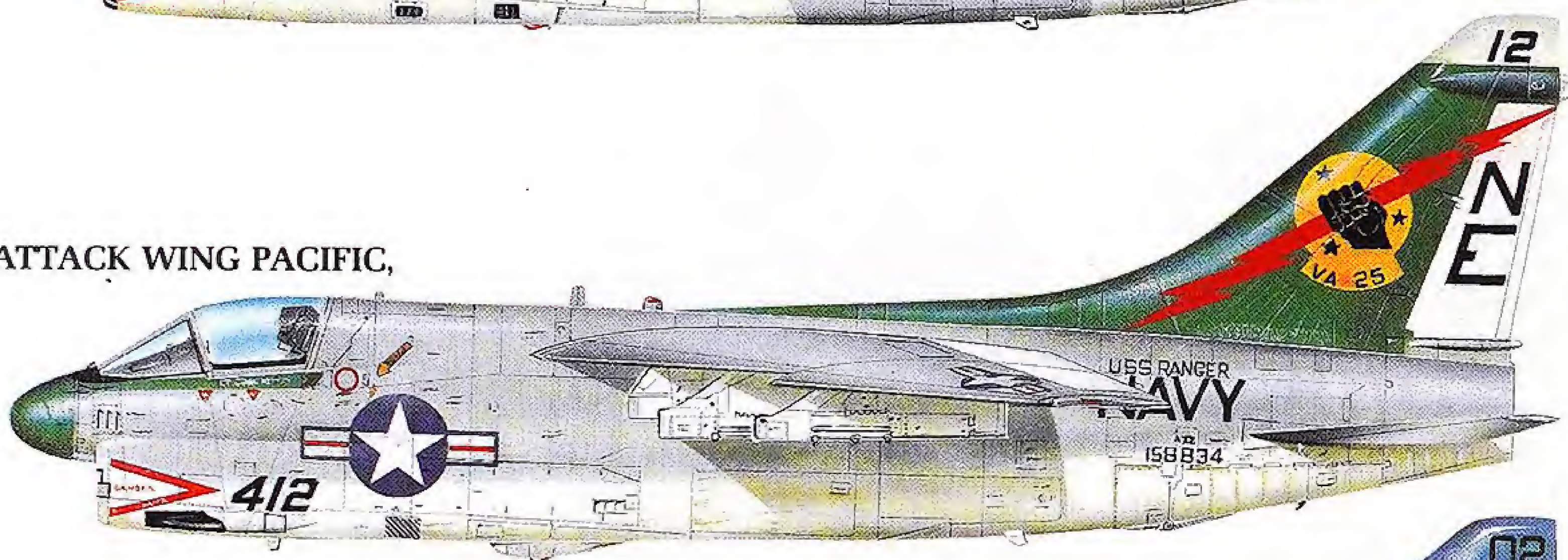
A-7B, VA-46 "CLANSMEN", LIGHT ATTACK WING ONE, USN, CECIL FIELD, USA, MID 1970s

Assigned to the USS John F Kennedy, this aircraft has the unit's tartan trim at the fin tip which was normally repeated around the external fuel tanks. Despite appearances, the fin code is AB.



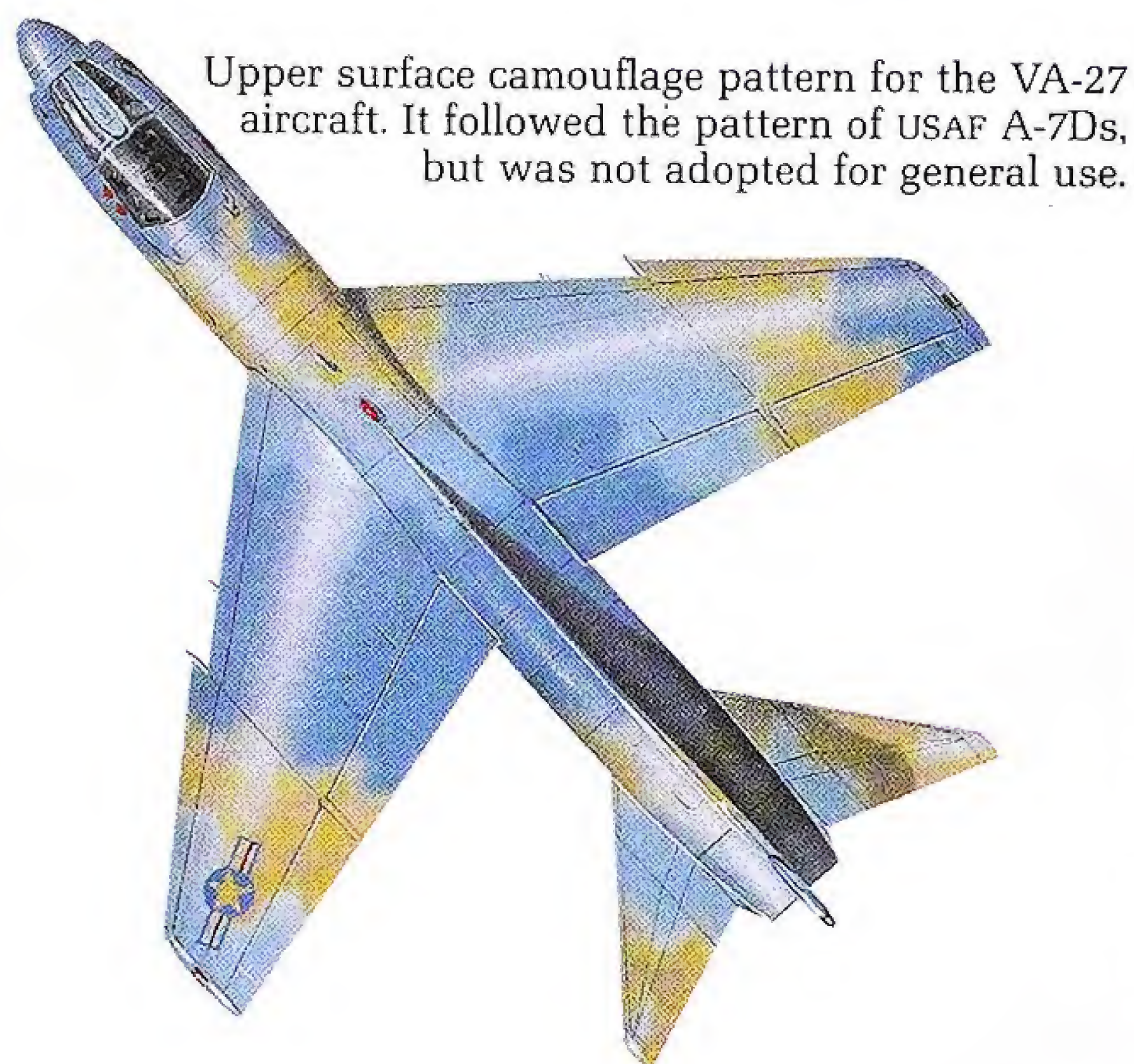
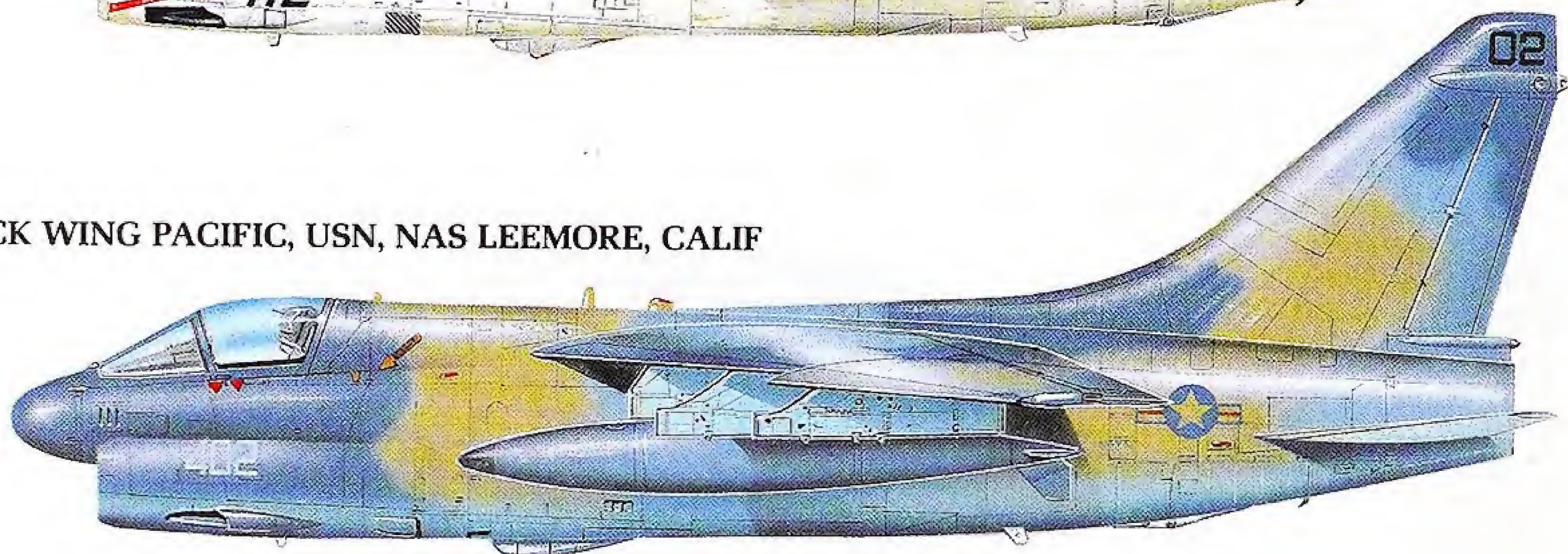
A-7E, VA-25 "FISTS OF THE FLEET," LIGHT ATTACK WING PACIFIC, USN, NAS LEEMORE, USA, 1975

Shown when operating from the carrier USS Ranger (CV-61) this Corsair is finished in the then-standard Light Gull Gray and Gloss White scheme. The Squadron is now designated VFA-25 and operates the F-18 Hornet.



A-7E, VA-27 "ROYAL MACES," LIGHT ATTACK WING PACIFIC, USN, NAS LEEMORE, CALIF

This unusual camouflage was one of several experimental low-visibility schemes tried in the mid-Seventies and comprised blue, light blue and tan uppersurfaces with light blue undersides. White was deleted from the insignia. The unit was operating from the USS Enterprise (CVN-65) at the time.



Upper surface camouflage pattern for the VA-27 aircraft. It followed the pattern of USAF A-7Ds, but was not adopted for general use.



Underside scheme of the 23rd TFW aircraft. Light gray was previously used under these aircraft, but at low level over wooded terrain, the pilot had only to apply some bank to the aircraft for it to be plainly visible against the dark background colors.

A-7D, 23rd TACTICAL FIGHTER WING, USAF, ENGLAND AFB, LATE 1970s

"Wraparound" camouflage came into effect on USAF Corsairs in the late 1970s. In October 1977, this unit won every award in a Tactical Bombing Competition against the Royal Air Force at RAF Lossiemouth, Scotland. The 23rd subsequently converted to the A-10A Thunderbolt.



LOCKHEED F-104

"The missile with a man in it!" was how the Mach 2 Starfighter was popularly labeled when this single-seat interceptor first appeared in the mid-Fifties. It entered USAF service as the F-104A in 1958 and was selected for large-scale production in Europe in F-104G form. Italy built the final version (F-104S) and including 207 Japanese-built aircraft, total production reached 2406. Taiwan, Italy, Greece and Turkey still operate F-104s.

CF-104G, ESK 723/726 ROYAL DANISH AIR FORCE, AALBORG, DENMARK, 1982

One of 15 ex-Canadian single-seat Starfighters supplied to Denmark, R-855 displays low-visibility markings over its matt Olive Drab color. This shade tended to weather to a gray-brownish finish.



F-104G, 30th TACTICAL FIGHTER WING, REPUBLIC OF CHINA AIR FORCE, CHING CHUAN KANG, TAIWAN, 1987

This Vietnam-style SE Asia camouflage is just one of a number of finishes to be seen on Taiwan-based combat aircraft. More than 100 F-104s have been acquired by the RCAF from other air forces to supplement their F-5Es.



F-104G, 116 WING, HELLENIC AIR FORCE, ARAXOS, GREECE, 1982

Greece has received Starfighters from a number of sources including Spain, Italy, and West Germany. This example has its serial on the fin and the last three digits applied in early US "Buzz-number" style on the rear fuselage.



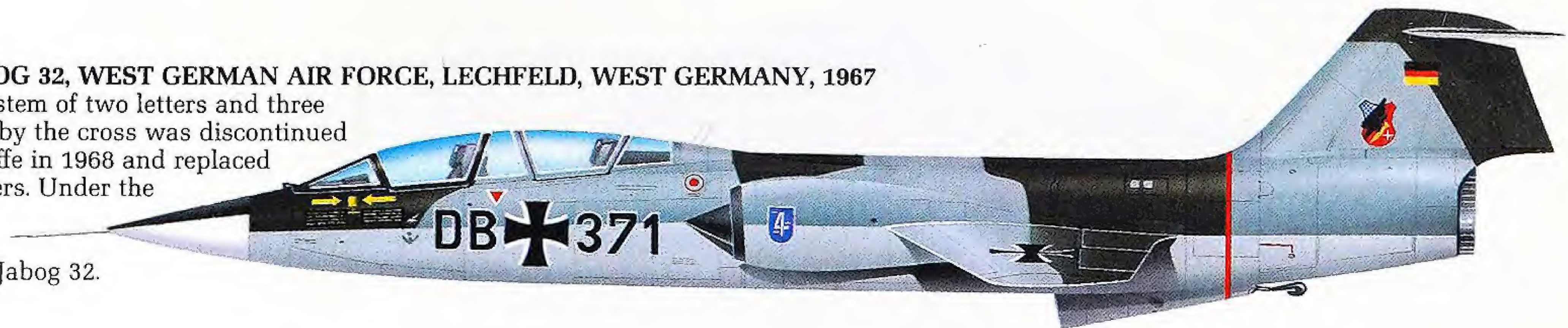
F-104S, 191 FILO, 9 AIR BASE, TURKISH AIR FORCE, BALIKESHIR, TURKEY, 1987

This disruptive camouflage scheme was applied to all 40 new-built F-104S aircraft bought from Italy in the Seventies. Just about half remain flyable alongside some older F-104Gs.



TF-104G, JABOG 32, WEST GERMAN AIR FORCE, LECHFELD, WEST GERMANY, 1967

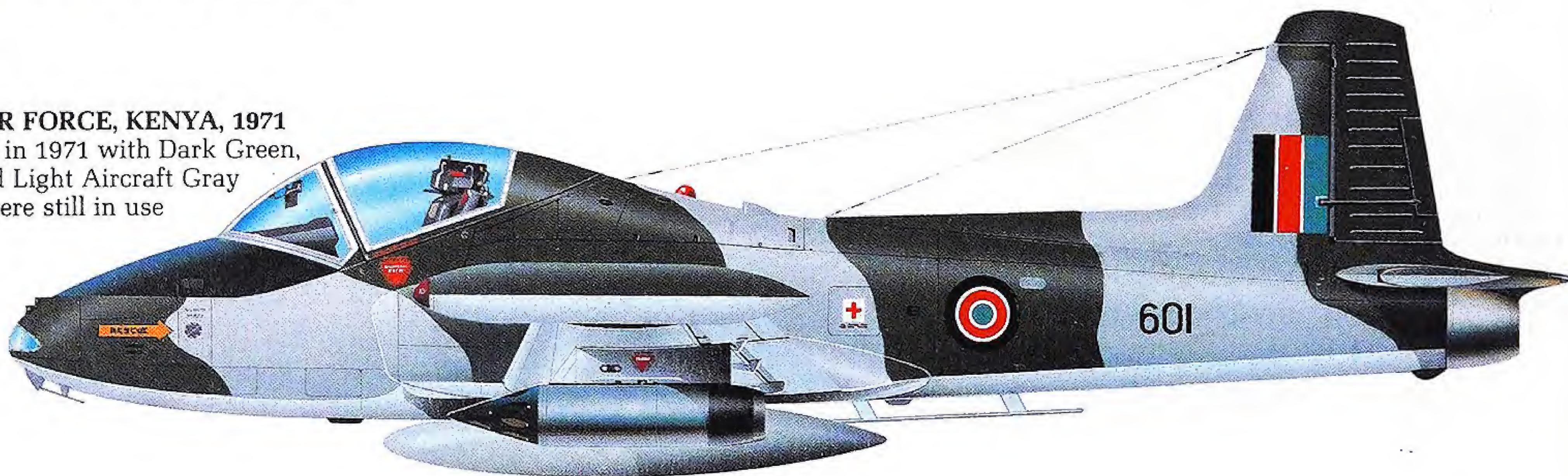
The coding system of two letters and three digits divided by the cross was discontinued by the Luftwaffe in 1968 and replaced by four numbers. Under the early system, DB related specifically to Jabog 32.



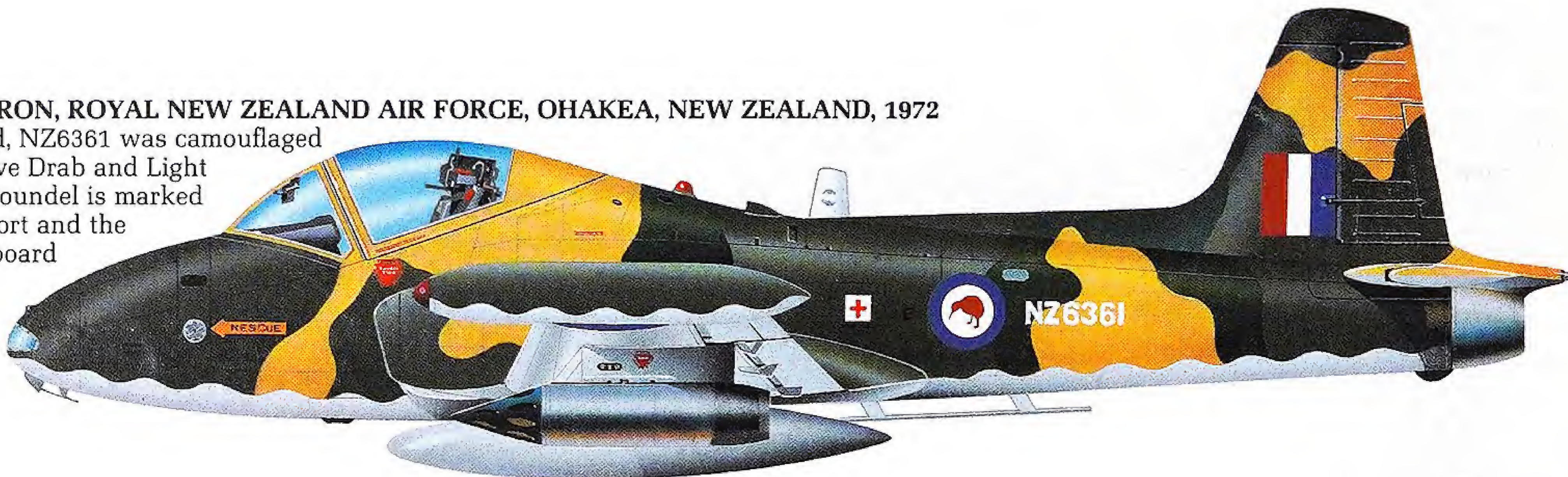
BRITISH AEROSPACE STRIKEMASTER

Developed from the Jet Provost basic trainer, the Strikemaster two-seat, light attack and training aircraft made its first flight on 26 October 1967, the first deliveries being made (to Saudi Arabia) the following year. Powered by a Rolls-Royce Viper engine, this functional design proved particularly robust when used on ground-attack duties in the harsh climate of the Middle East. Total Strikemaster production was 15.

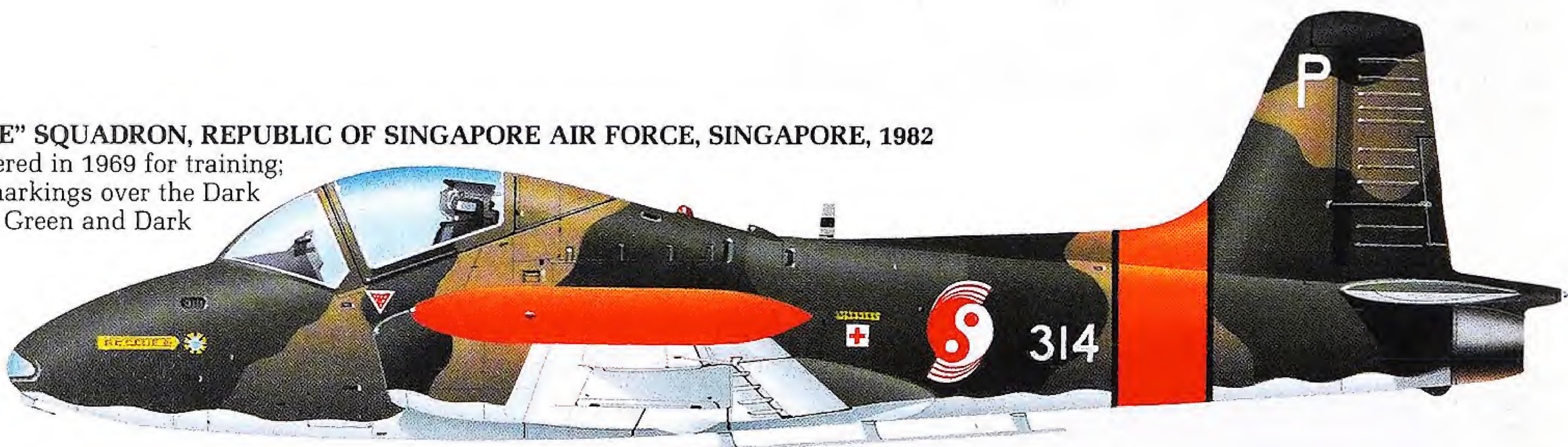
Mk 87, KENYA AIR FORCE, KENYA, 1971
Six were delivered in 1971 with Dark Green, Dark Sea Gray and Light Aircraft Gray undersides. Five were still in use in 1988.



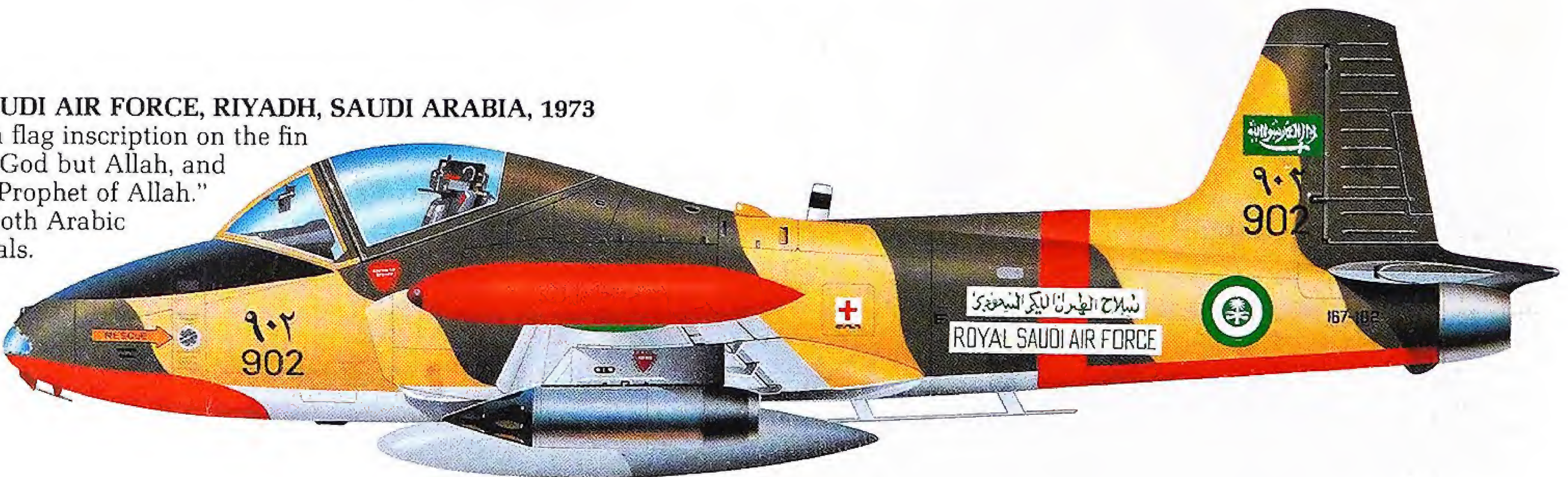
Mk 88, 14 SQUADRON, ROYAL NEW ZEALAND AIR FORCE, OHAKEA, NEW ZEALAND, 1972
One of 16 delivered, NZ6361 was camouflaged in Dark Green, Olive Drab and Light Brown. The wing roundel is marked on the top of the port and the bottom of the starboard wing.



Mk 84, 130 "EAGLE" SQUADRON, REPUBLIC OF SINGAPORE AIR FORCE, SINGAPORE, 1982
Sixteen were delivered in 1969 for training; hence the dayglo markings over the Dark Green, Mid-Bronze Green and Dark Earth scheme.



Mk 80, ROYAL SAUDI AIR FORCE, RIYADH, SAUDI ARABIA, 1973
The white on green flag inscription on the fin reads "There is no God but Allah, and Muhammad is the Prophet of Allah." Unit codes are in both Arabic and Roman numerals.

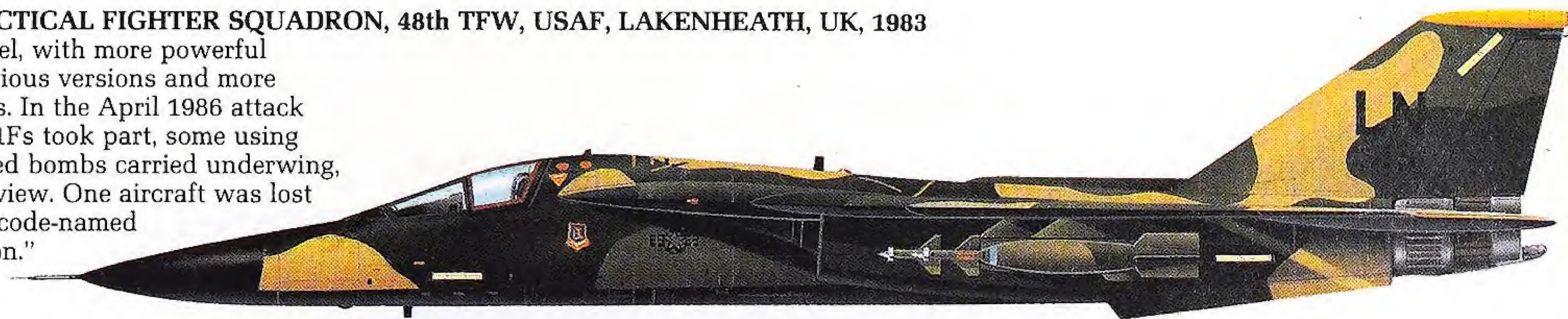


GENERAL DYNAMICS F-111

Since the stormy days of its development the F-111 has consistently proved itself to be an admirable all-weather attack aircraft, capable of delivering guided weapons on to a target thousands of miles from its base. Following the first flight in December 1964, GD developed the design from the initial F-111A, which saw action in Vietnam, through the C for Australia and the D, E and F for the USAF. The carrier-based F-111B for the Navy was canceled, but SAC introduced 76 FB-111As, taking the total production to 562.

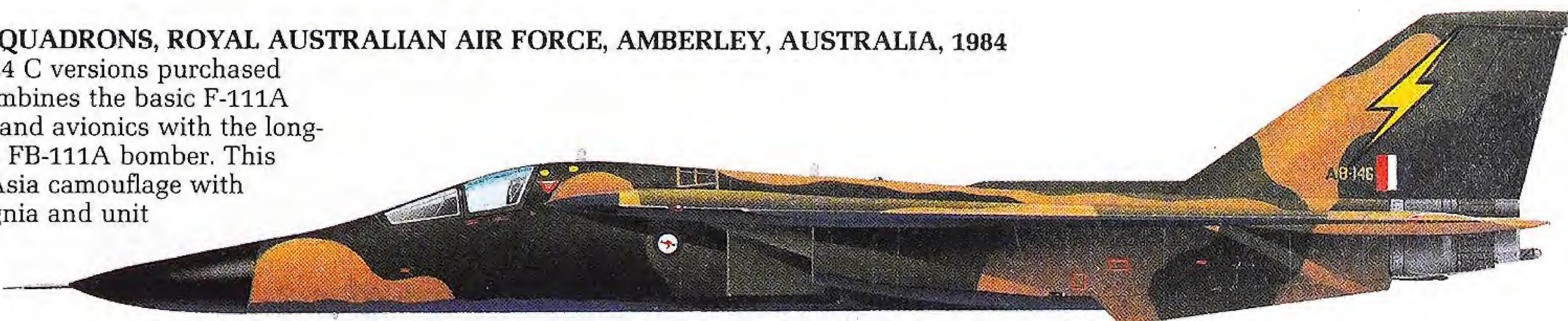
F-111F, 493rd TACTICAL FIGHTER SQUADRON, 48th TFW, USAF, LAKENHEATH, UK, 1983

The ultimate model, with more powerful engines than previous versions and more advanced avionics. In the April 1986 attack on Libya, 13 F-111Fs took part, some using 2000lb laser-guided bombs carried underwing, as shown in this view. One aircraft was lost on the operation, code-named "El Dorado Canyon."



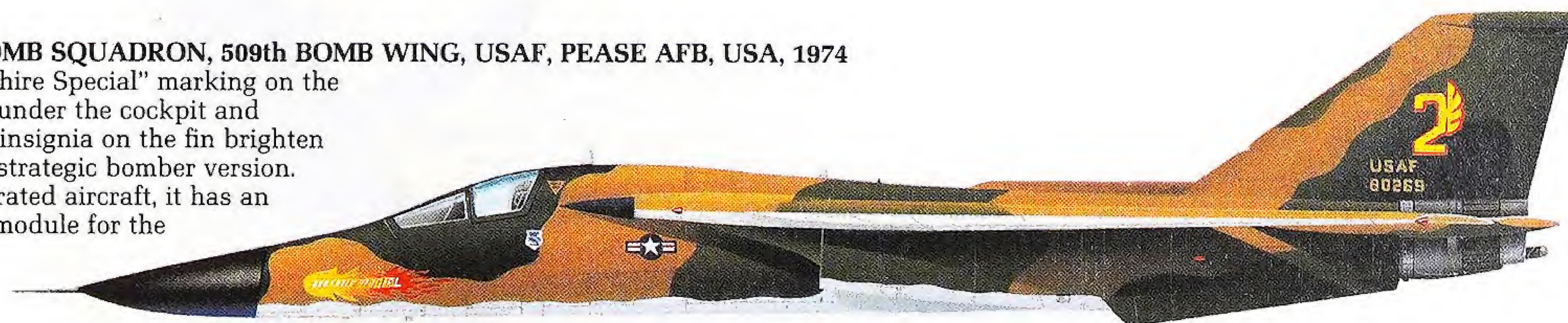
F-111C, 1 and 6 SQUADRONS, ROYAL AUSTRALIAN AIR FORCE, AMBERLEY, AUSTRALIA, 1984

A8-146 is one of 24 C versions purchased by the RAAF. It combines the basic F-111A airframe, engines and avionics with the long-span wings of the FB-111A bomber. This example has SE Asia camouflage with miniaturized insignia and unit lightning flash on the fin.



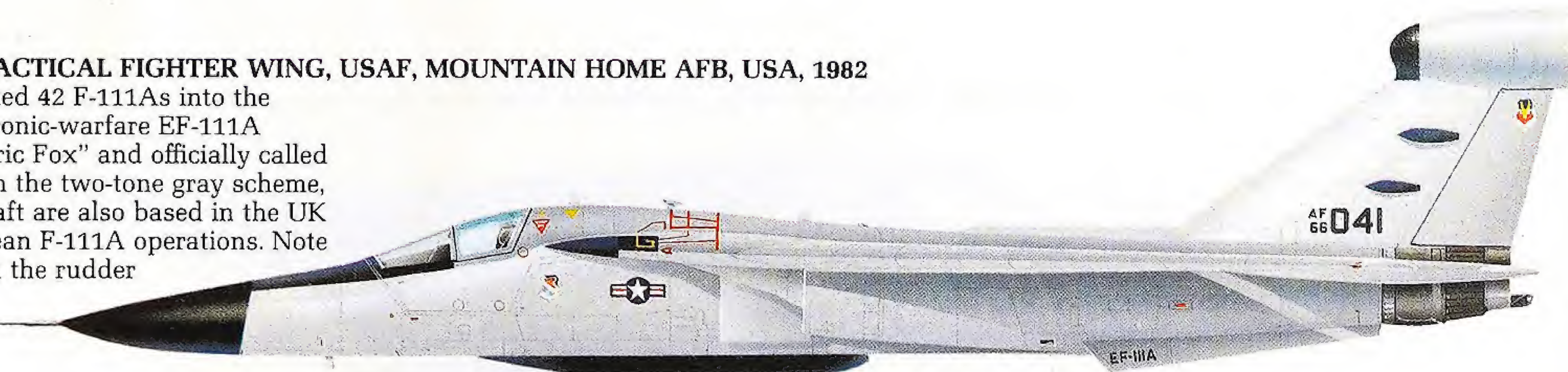
FB-111A, 33rd BOMB SQUADRON, 509th BOMB WING, USAF, PEASE AFB, USA, 1974

The "New Hampshire Special" marking on the nose, SAC badge under the cockpit and Second Air Force insignia on the fin brighten this camouflaged strategic bomber version. Like the TAC-operated aircraft, it has an ejectable cockpit module for the two crew.



EF-111A, 366th TACTICAL FIGHTER WING, USAF, MOUNTAIN HOME AFB, USA, 1982

Grumman converted 42 F-111As into the defense and electronic-warfare EF-111A nicknamed "Electric Fox" and officially called Raven. Finished in the two-tone gray scheme, a number of aircraft are also based in the UK to support European F-111A operations. Note the TAC badge on the rudder and unit badge by the cockpit.



F-111A, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, EDWARDS AFB, USA, 1973

An example of a trials aircraft for aerodynamic research, the 13th F-111 built received a new wing of shorter span and other refinements under the NASA Transonic Aircraft Technology (TACT) program. This aircraft was further modified and flown in 1985 with a Mission Adaptive Wing for the Advanced Fighter Technology Integration program.

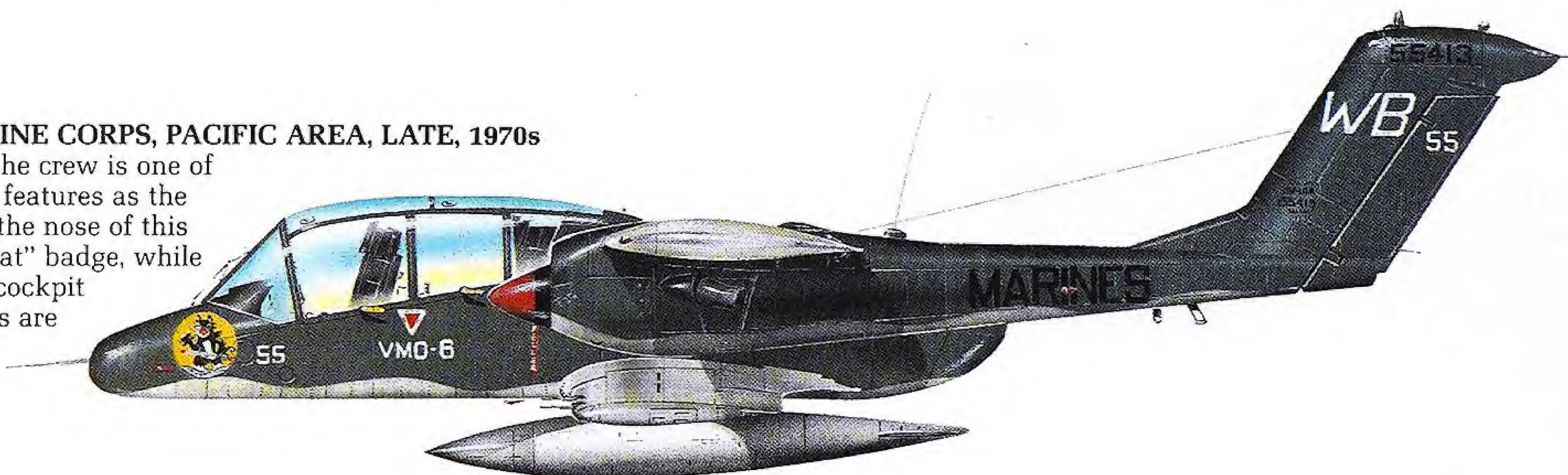


NORTH AMERICAN/ ROCKWELL OV-10

Tailored for the counter-insurgency role, the Bronco was the winner of a joint USAF/Navy/Marine Corps competition for a Light Armed Reconnaissance Aircraft, the prototype flying in July 1965. The podded fuselage slung under a broad wing can carry a range of equipment and weapons in addition to a crew of two and up to five paratroops. By 1969, 114 had been delivered to the USMC, while the USAF used 157 for Forward Air Control (FAC) duties, mainly in Vietnam. Although the US Navy did not adopt the type, six overseas countries ordered OV-10s and production ended with the 390th machine.

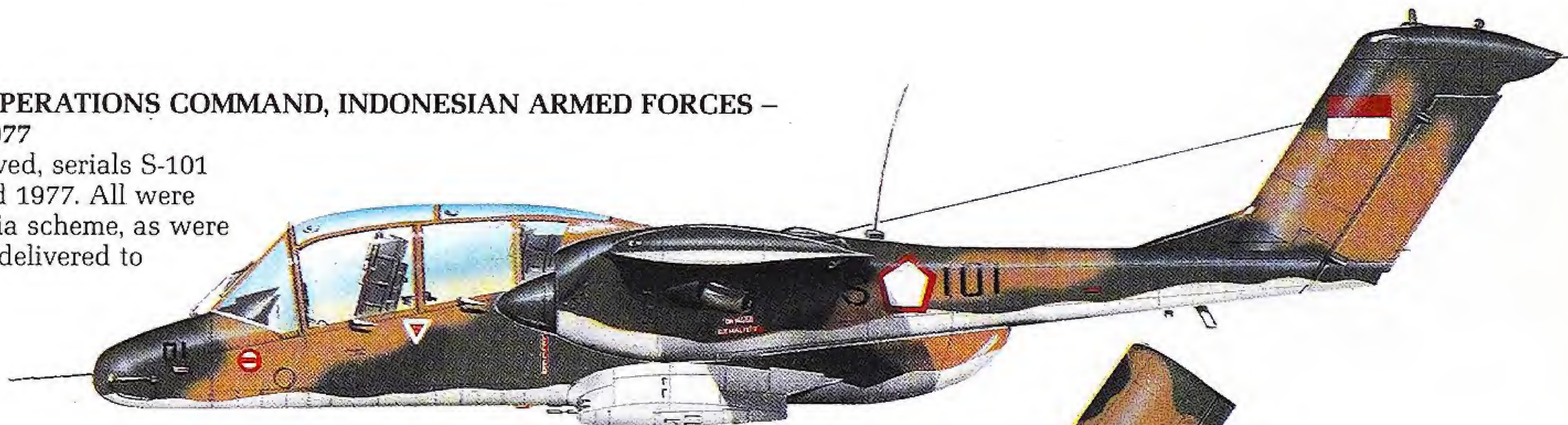
OV-10A, VMO-6, US MARINE CORPS, PACIFIC AREA, LATE, 1970s

Outstanding visibility for the crew is one of the Bronco's most obvious features as the side-views emphasize. On the nose of this aircraft is the unit's "Tomcat" badge, while the red triangle under the cockpit indicates that ejection seats are fitted.



OV-10F, 3 SQUADRON, OPERATIONS COMMAND, INDONESIAN ARMED FORCES – AIR FORCE, BAUCAU, 1977

Sixteen aircraft were received, serials S-101 to S-116, between 1976 and 1977. All were camouflaged in this SE Asia scheme, as were the 38 OV-10Cs originally delivered to Thailand.

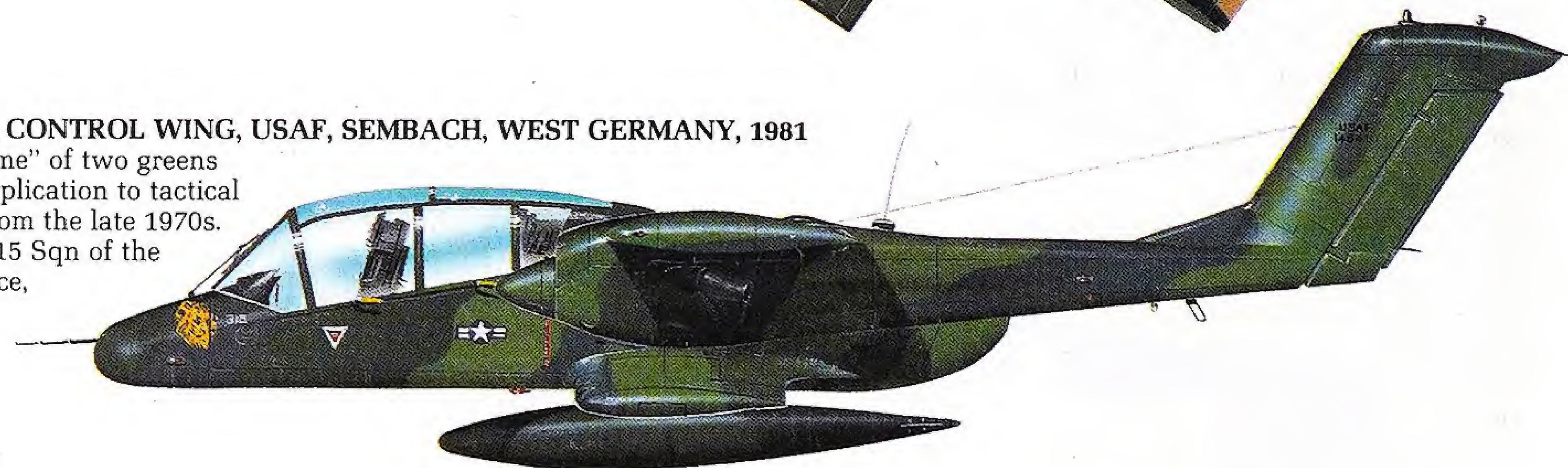


Upper surface camouflage of the Indonesian aircraft, devoid of any national insignia, but retaining the distinctive walkway panel marking linking the refueling points for the wing tanks.



OV-10A, 601st TACTICAL CONTROL WING, USAF, SEMBACH, WEST GERMANY, 1981

The so-called "Lizard scheme" of two greens and a gray designed for application to tactical aircraft based in Europe from the late 1970s. The lion badge is that of 315 Sqn of the Royal Netherlands Air Force, acquired unofficially during an exchange visit.



OV-10A, 20th TACTICAL AIR SUPPORT SQUADRON, 601st TCW, USAF, SEMBACH, WEST GERMANY, 1980

Standard gray FAC scheme with a 10in fuselage star, repeated above the port upper wing surface and lower starboard, 6in high number/letter combination on the fin and a 3in wide propeller warning band on the side of the fuselage.

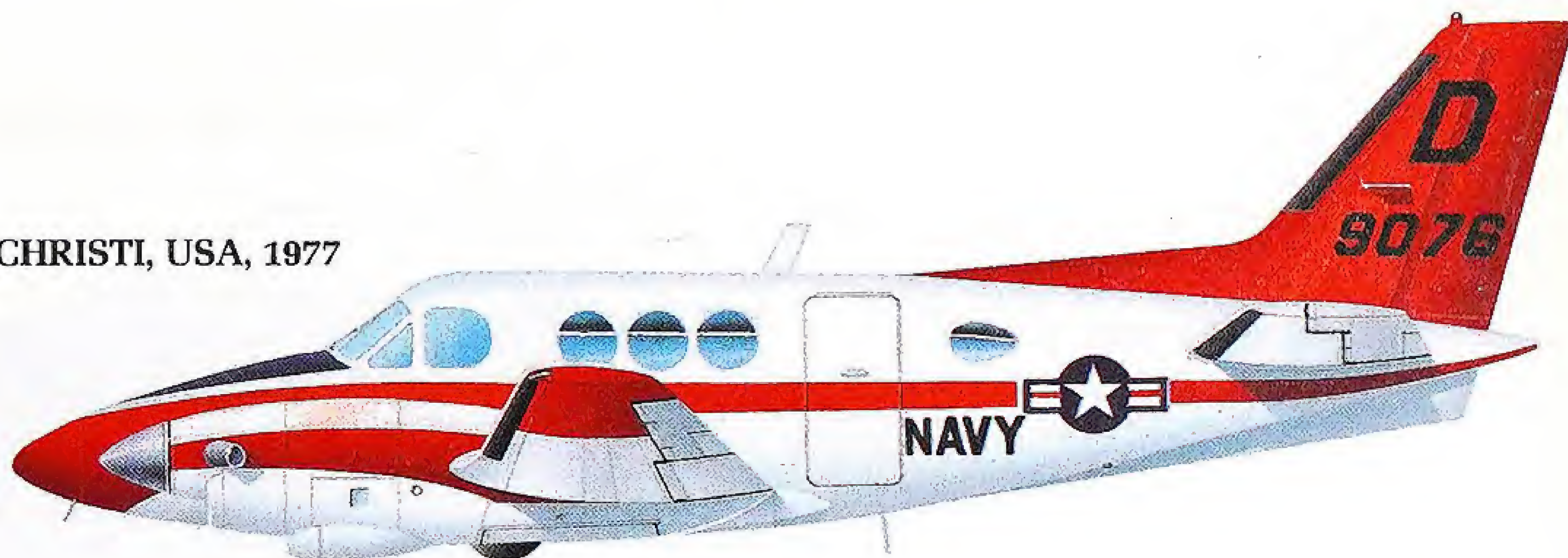


BEECH KING AIR

Twin-engined corporate aircraft have been adopted by armed forces around the world to fulfil liaison, communications and training duties. One of the largest manufacturers of this type of aircraft is the American Beech company. The early Queen Air of the Sixties has been followed by the King Air, adopted by the US Army and USAF, and the larger Super King Air with pressurized seating for up to 14 passengers and distinguished by a T-tail.

T-44A, TAW-4 UNITED STATES NAVY, NAS CORPUS CHRISTI, USA, 1977

The US Navy bought more than 60 of these executive "twins" for multi-engine training replacing old, expensive piston-engined aircraft. The gloss red and white scheme is a safety measure, but also provides an attractive finish.



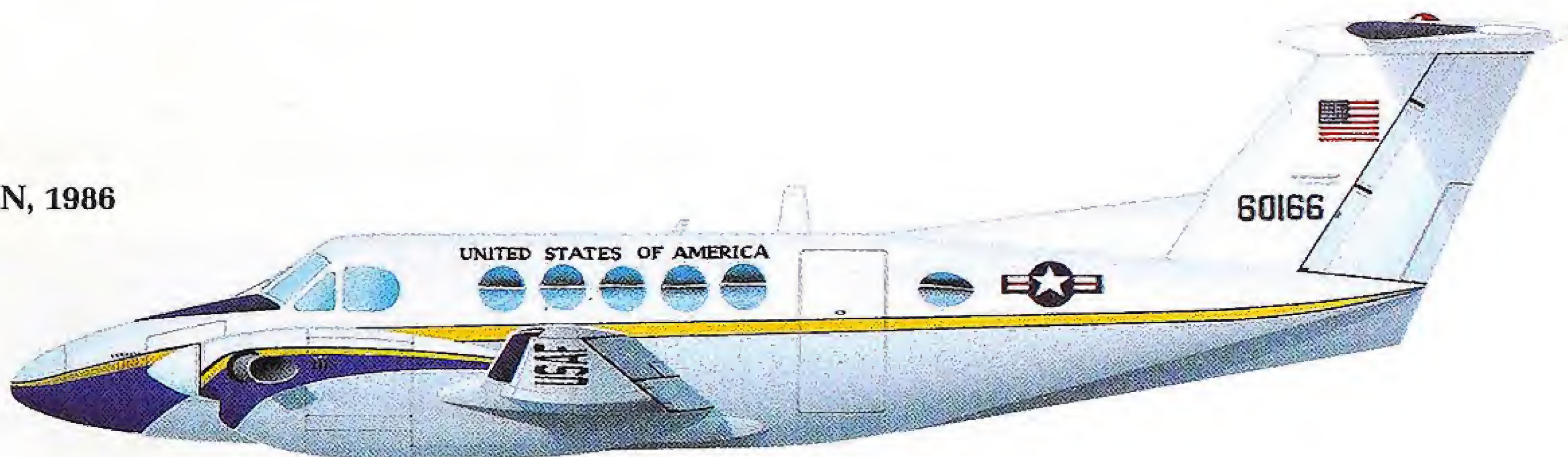
KING AIR E90, ESCUADRON TR-02, VENEZUELAN NAVY, CARACAS-LA CARLOTA, VENEZUELA, 1982

Typical of the appearance of most military liaison aircraft is this example used for VIP use. In many cases, color finishes are the same as those applied to the standard corporate version, the main differences usually being the internal layout and the markings.



C-12A, US AIR FORCE, ISLAMABAD, PAKISTAN, 1986

A total of 30 of these Super King Air Model 200s were bought for attaché and military assistance advisory missions throughout the world. Other variants in use include the C-12F, the C-12J version of the Beech 1900 airliner and the US Army's C-12A Huron.



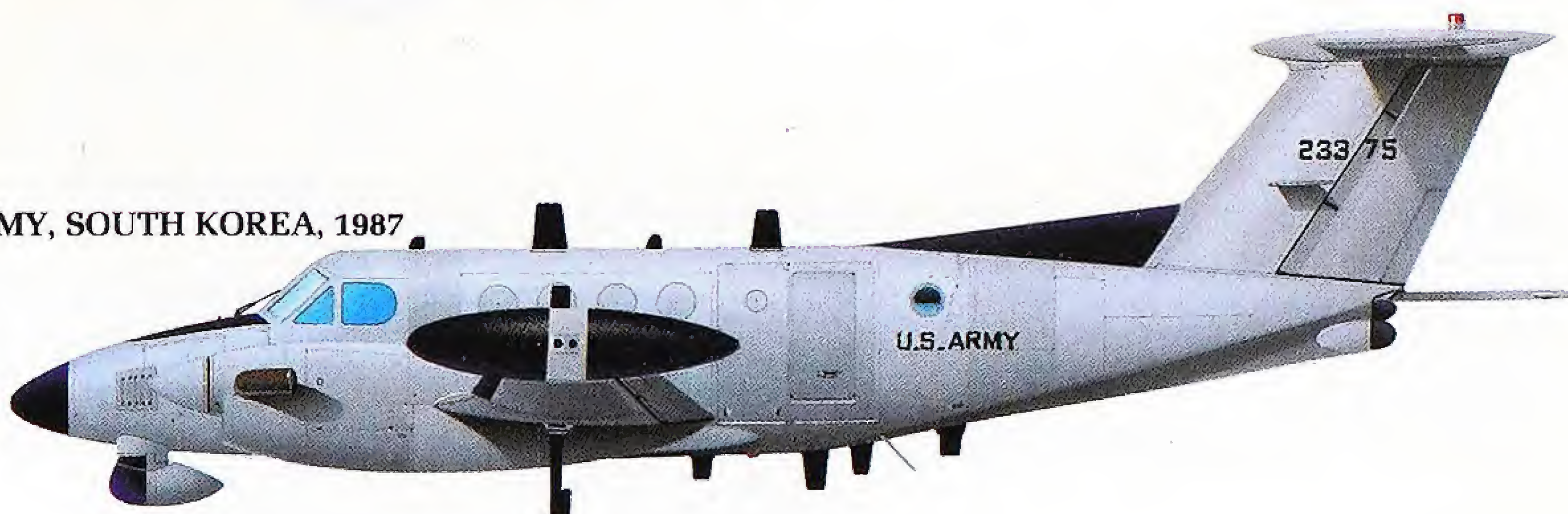
KING AIR 200, MARITIME SQUADRON, IRISH AIR CORPS, BALDONNEL, IRELAND, 1988

Three aircraft are in service, two of them on fishery patrol and the other on transport and training duties. The cheat-line colors are the same as those in the national markings.



RC-12D, MILITARY INT. BATTALION, US ARMY, SOUTH KOREA, 1987

Code-named *Guardrail V* and used for battlefield reconnaissance, this electronic warfare-configured "twin" is a good example of how changed some previously-innocuous looking executive can become. All but anonymous, the aircraft is finished in medium gray.

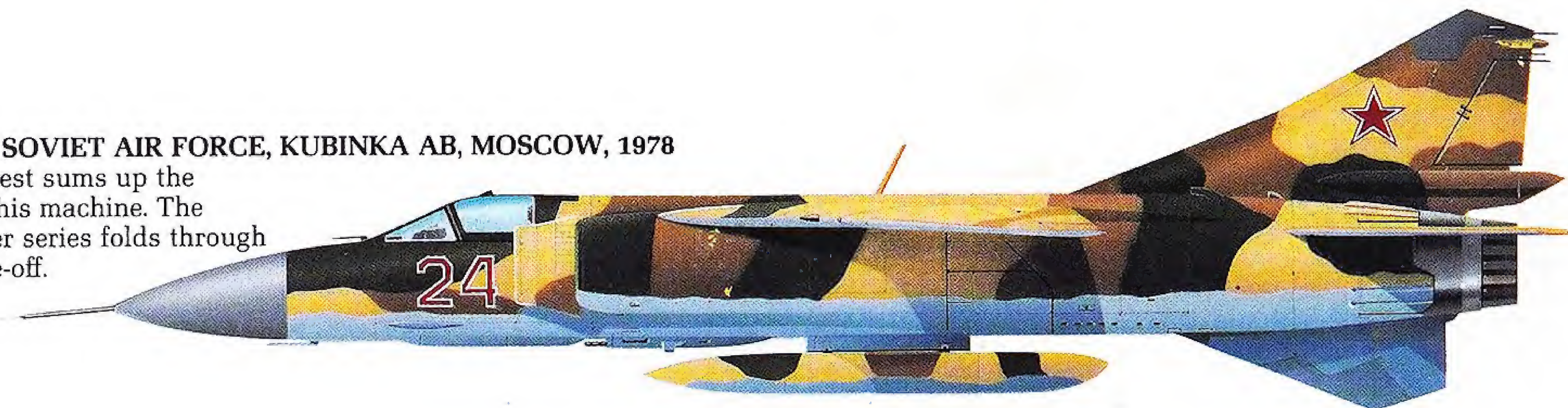


MIKOYAN- GUREVICH MiG-23/MiG-27

Introduced into regiments of the Soviet Air Force in the early Seventies, the variable-geometry MiG-23 was a logical step for the MiG Bureau to take, given that a number of Western aircraft manufacturers were incorporating swing wings to get better airfield performance while retaining an acceptable combat capability. The initial fighter version dubbed Flogger B has been developed through the G and K, while the dedicated attack MiG-27 Flogger D is now also found in J form. In between other types have ensured a considerable production run for this versatile design.

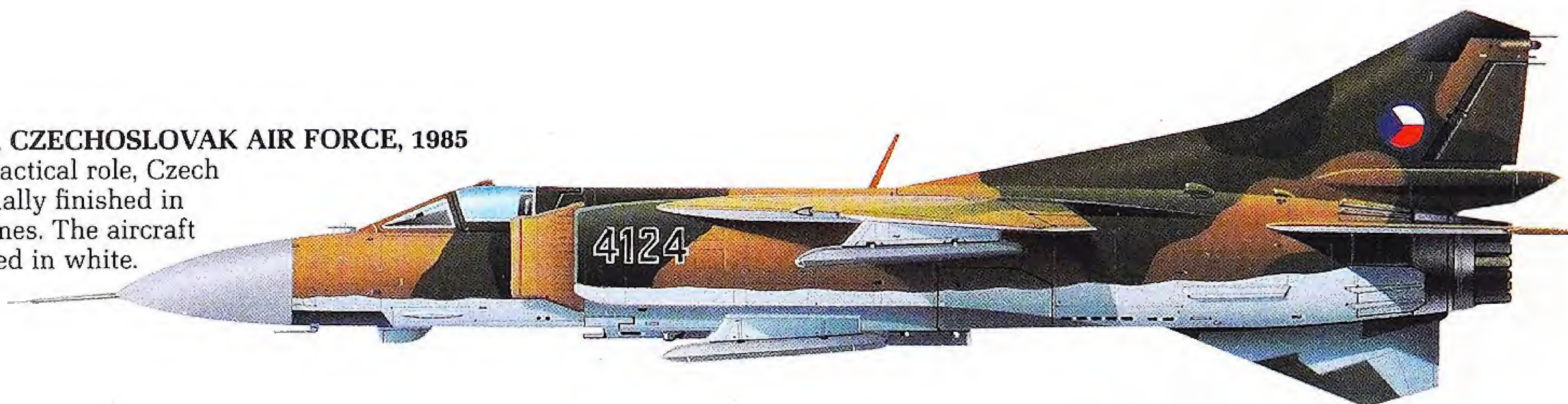
MiG-23 "FLOGGER G", SOVIET AIR FORCE, KUBINKA AB, MOSCOW, 1978

Green, brown and tan best sums up the tactical camouflage on this machine. The ventral fin on the Flogger series folds through 90° for landing and take-off.



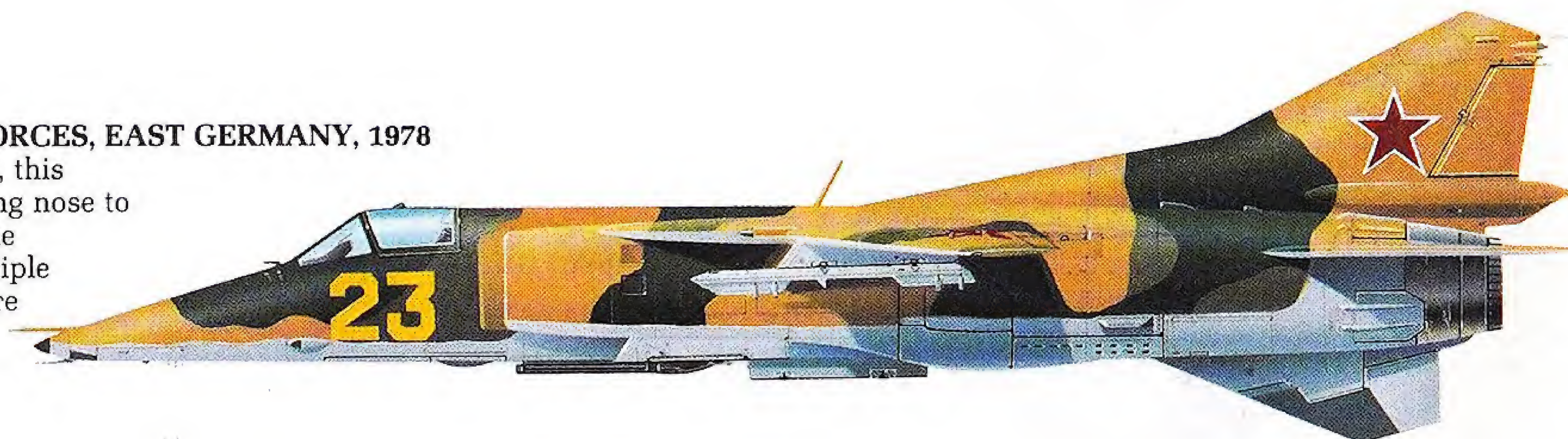
MiG-23 "FLOGGER B", CZECHOSLOVAK AIR FORCE, 1985

Tasked mainly with a tactical role, Czech combat aircraft are usually finished in appropriate color schemes. The aircraft number is black outlined in white.



MiG-27 "FLOGGER D", SOVIET FORCES, EAST GERMANY, 1978

Compared with the fighter versions, this attack aircraft has a sharply tapering nose to give the pilot better visibility. On the wing pylon of this aircraft is a multiple ejector rack for bombs, and there are other weapon pylons under the fuselage and on each side behind the wing.



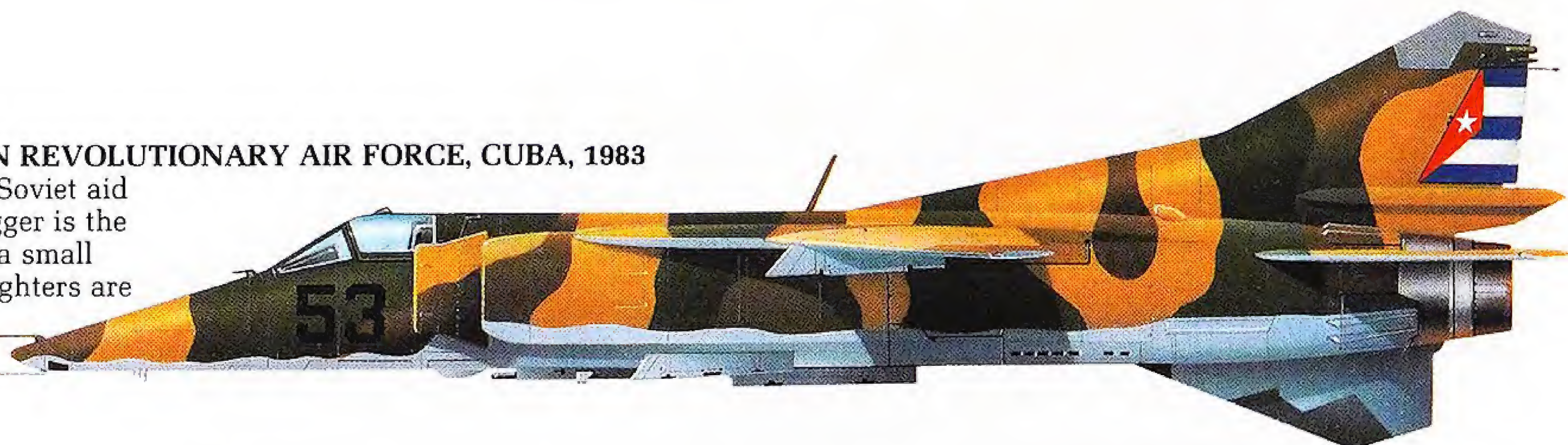
MiG-23BM "FLOGGER F", CZECHOSLOVAK AIR FORCE, PARDUBICE, CZECHOSLOVAKIA, 1980

This is the attack version of the interceptor, designed for export customers. It retains the basic airframe but incorporates a new chisel nose for the attack role (note the intake and exhaust areas and compare them with the Soviet Flogger D above).



MiG-23BM "FLOGGER F," CUBAN REVOLUTIONARY AIR FORCE, CUBA, 1983

Cuba has long been a recipient of Soviet aid and at the time of writing, the Flogger is the latest combat type to be supplied; a small number of later MiG-29 Fulcrum fighters are likely to arrive if past indications are anything to go by.

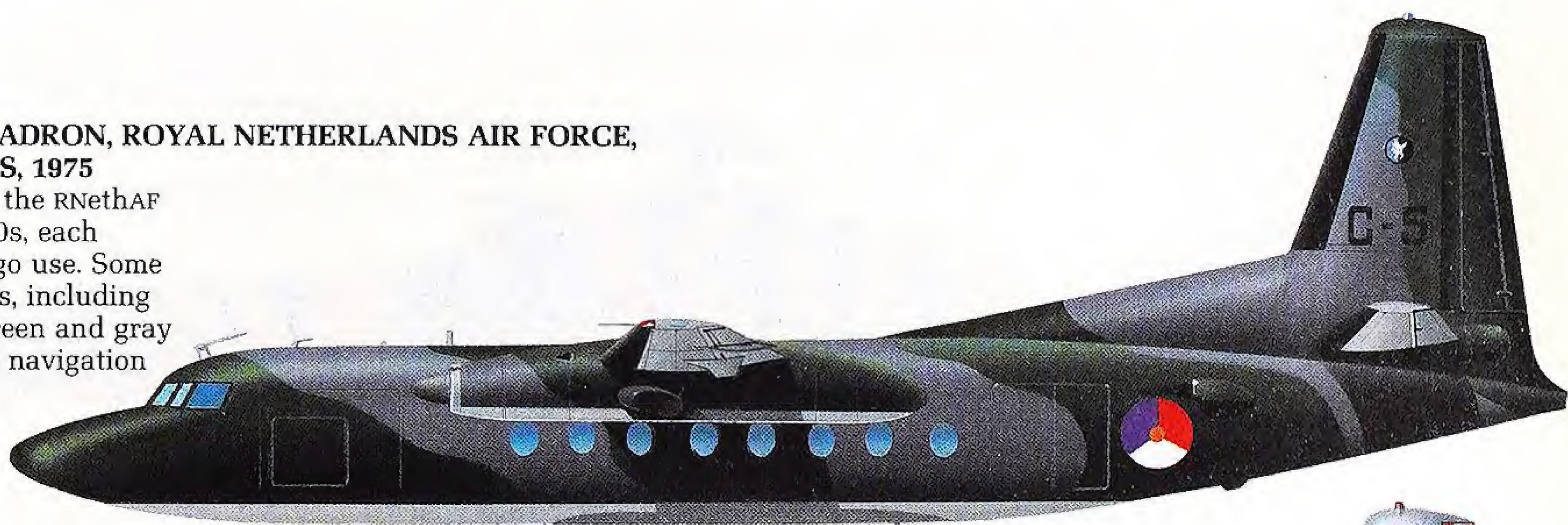


FOKKER F27

With a pedigree which stretches back to the famous Fokker airliners of the Twenties, the F27 Friendship achieved sales of some 760 to operators in 63 countries. Military users of this turbine-engined transport totaled more than 25 and most still use the type on troop-carrying, freight, VIP or maritime patrol duties. The name Troopship is generally only associated with the F27s flown by the Dutch AF, while Maritime is the official Fokker name of a dedicated over-water patrol variant.

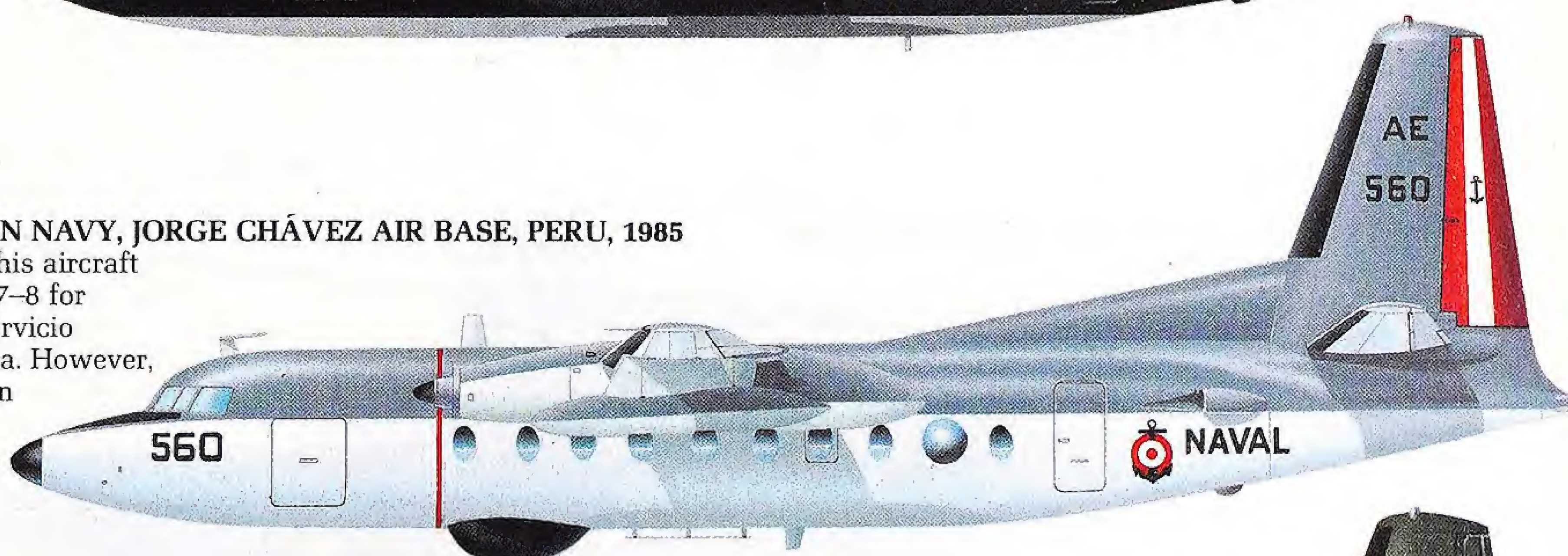
Mk 300M TROOPSHIP, 334 SQUADRON, ROYAL NETHERLANDS AIR FORCE, SOESTERBERG, NETHERLANDS, 1975

Twelve aircraft were delivered to the RNethAF in 1960-1, including three Mk 100s, each initially capable of troop and cargo use. Some were later converted to other roles, including C-5 which was camouflaged in green and gray in 1971 and changed to become a navigation trainer.



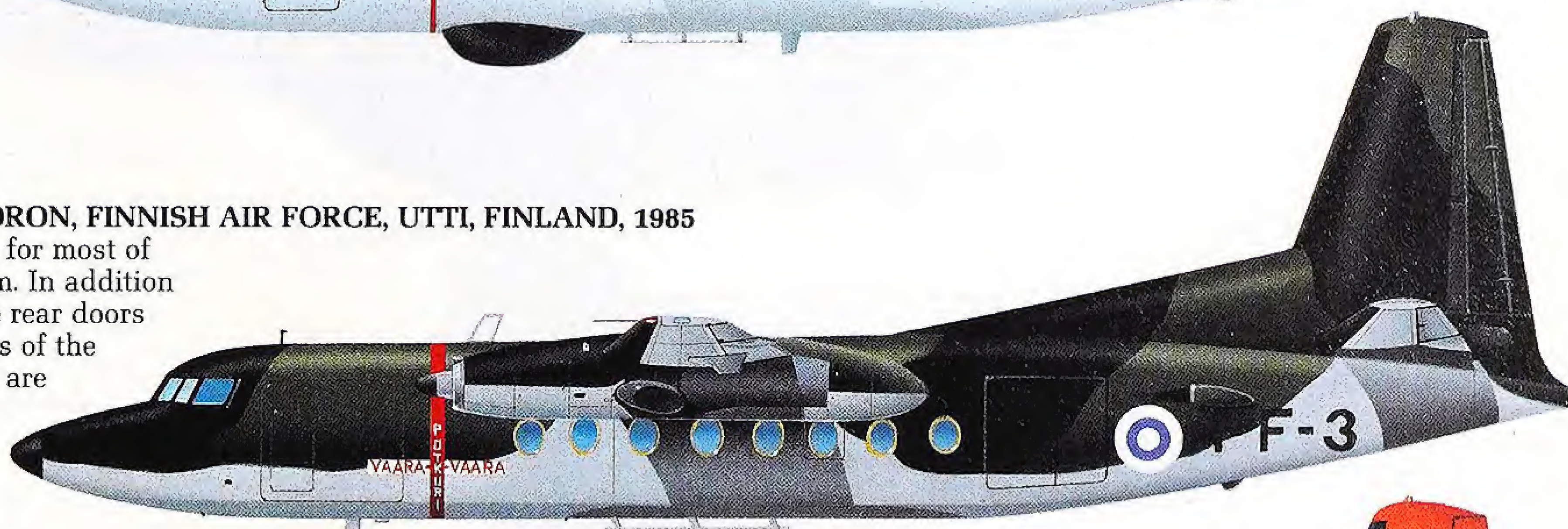
F27MPA MARITIME, PERUVIAN NAVY, JORGE CHÁVEZ AIR BASE, PERU, 1985

Identified by the belly radome, this aircraft was one of two delivered in 1977-8 for coastal patrol duties with the Servicio Aeronavale de la Marina Peruana. However, accidents befell both machines in 1986 and 1987.



Mk 400M, TRANSPORT SQUADRON, FINNISH AIR FORCE, UTTI, FINLAND, 1985

This is one of three aircraft used for most of the logistic tasks with the air arm. In addition to the freight door forward, large rear doors permit paradrops from both sides of the aircraft. The other two machines are coded FF-1 and FF-2.



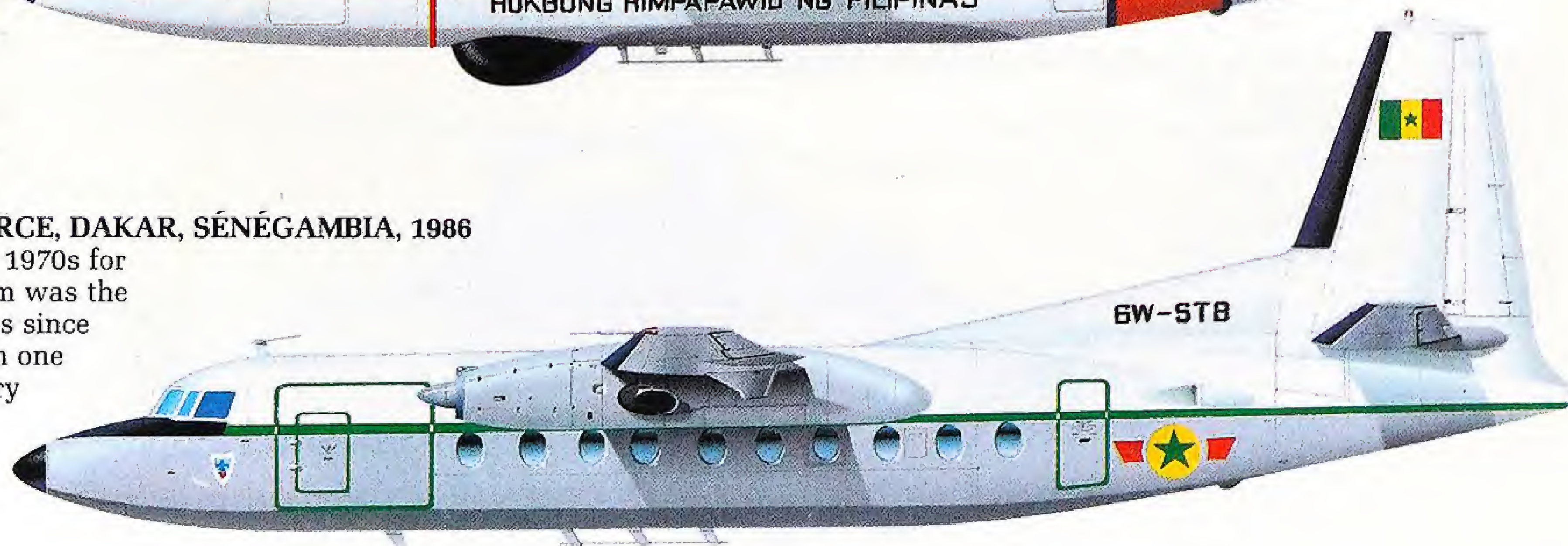
F27MPA MARITIME, 208 AIR TRANSPORT SQUADRON, 205th AIRLIFT WING, PHILIPPINE AIR FORCE, VILLAMOR, PHILIPPINES, 1987

High visibility markings are a feature of this patrol and SAR aircraft, one of three purchased. For pre-delivery flight tests, aircraft are usually allocated markings related to the country of manufacture. In this case the Dutch civil registration PH-EXF has been temporarily painted on the fin; it will be removed when the aircraft is delivered.



Mk 400, SÉNÉGAMBIA AIR FORCE, DAKAR, SÉNÉGAMBIA, 1986

Six F27s were bought in the late 1970s for transport duties when the air arm was the Sénégalaise Air Force. Sénégal has since merged with The Gambia to form one country. Like a number of military transport fleets, this one has civil registrations applied to its aircraft.



AEROSPATIALE/ WESTLAND PUMA

The prototype Puma first flew on 15 April 1965, the type being designed to meet a French Army requirement for a tactical helicopter. Entering service four years later, the Puma was subsequently adopted by the armed forces of more than 25 countries. The cabin has seating for up to 16 troops, the RAF version being designated HC Mk 1. Later developments center on the Super Puma, which is similar in appearance but has major changes to increase its performance. Production of both types totals more than 1000.

HC Mk 1, 230 SQUADRON, RAF GÜTERSLOH, WEST GERMANY, 1982

Special events call for special markings. In this case, the tiger motif in its badge qualified the squadron for attendance at the 1982 Tiger Meet, calling for a color scheme with a difference. A good effort by the ground crew – who had to return the aircraft to its standard scheme after the event.



AS.332L, EJERCITO DE CHILE, TOBALADA, CHILE, 1986

Main identifying features of the Super Puma are the additional fin under the tail, larger main wheel sponsons and a more pointed nose. This is one of three purchased in 1983, of which two survive.



SA.330J, IRISH AIR CORPS, BALDONNEL, EIRE, 1983

Sprayed in an olive drab scheme, this radar and flotation-equipped machine was trialed by the Irish Army during the early 1980s. It was later returned to Aérospatiale.



SA.330L, 3 ESCUADRON, 8 GRUPO DE AVIAÇÃO, BRAZILIAN AIR FORCE, CAMP DOS AFONSOS, 1986

Locally designated CH-33s, six Pumas were delivered to the Força Aérea Brasileira. Insignia on the boom is a combined squadron and group number, while on the cockpit door is the unit badge.

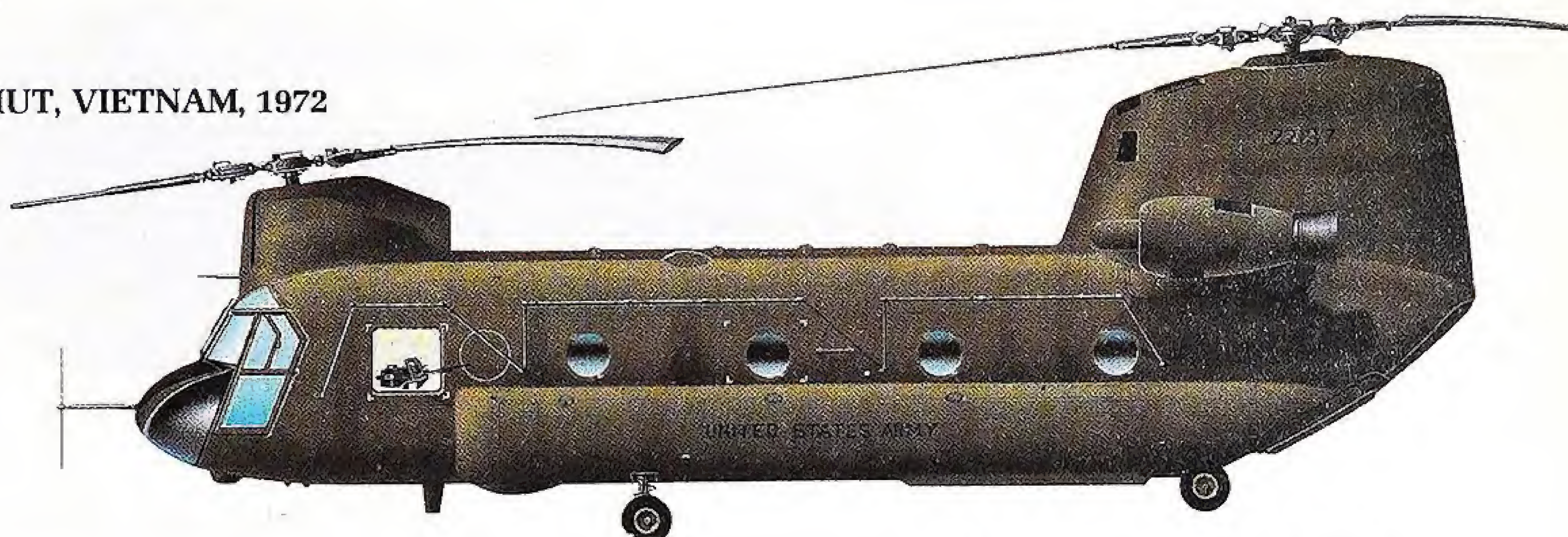


BOEING CH-47 CHINOOK

Since its first flight in September 1961 the twin-rotor Chinook has enjoyed steady sales success, with some 16 armed forces taking deliveries of this medium transport helicopter. The US Army, which set the initial requirement for a battlefield-mobility helicopter, has received more than 730, using and losing a few during the Vietnam war. License-built in Italy and Japan, production now is centered on the CH-47D and derivatives such as the MH-47E special-forces version.

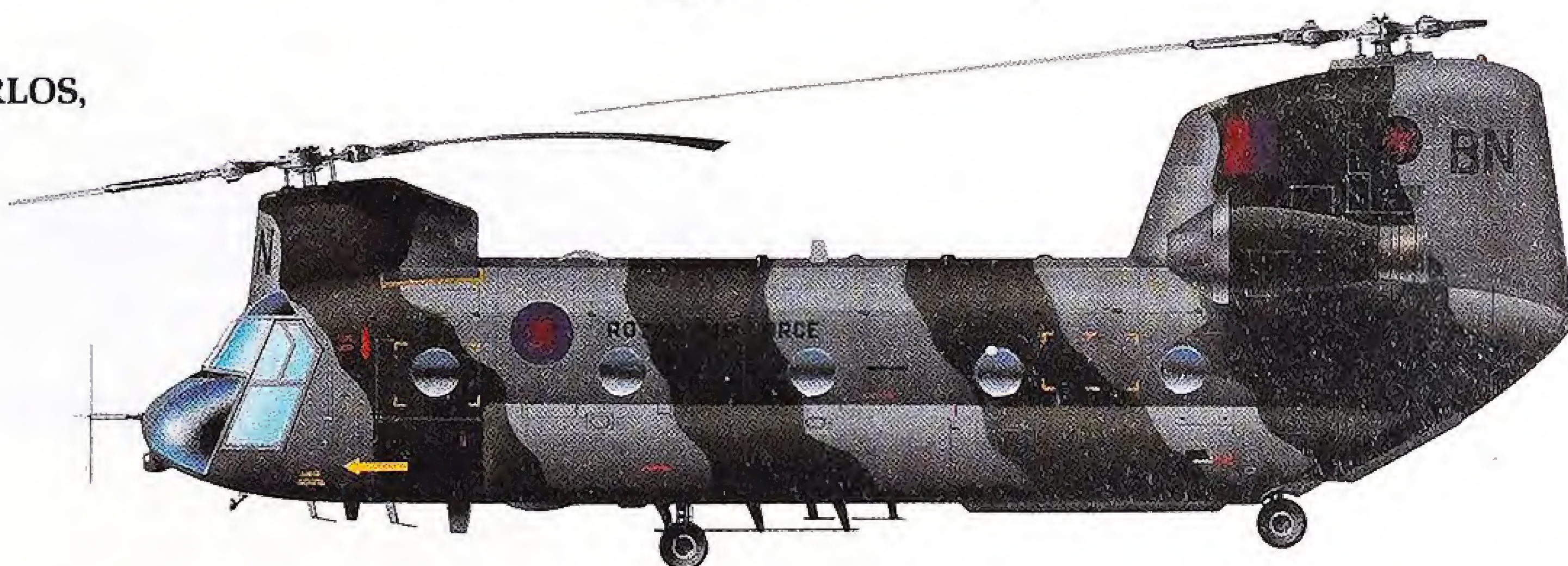
CH-47C, UNITED STATES ARMY, TAN SON NHUT, VIETNAM, 1972

Dubbed "The Hook" (and less printable nicknames) by the GIs in SE Asia, the Chinook provided the important heavy airlift required by the war in the South. Olive Drab overall was standard, as was the forward hatch-mounted MG.



HC Mk 1, 18 SQUADRON, RAF, PORT SAN CARLOS, FALKLAND ISLANDS, JUNE 1982

"Bravo November" was the sole survivor of the Exocet attack on the *Atlantic Conveyor* container ship on 25 May 1982. Camouflaged in Dark Green and Dark Sea Gray, this machine flew almost continuously until the Argentine surrender some three weeks later. The call-sign letters BN appeared on the front and rear rotor pylon in black.



CH-47C, ITALIAN ARMY LIGHT AVIATION, VITERBO, ITALY, 1982

With camouflage not too dissimilar to those flown by the RAF, the Italian Army machines are built by Elicotteri Meridionali and some 30 are currently in use. Two units are equipped with Chinooks, No 11 and 12 Gruppo Squadroni, both based at Viterbo.



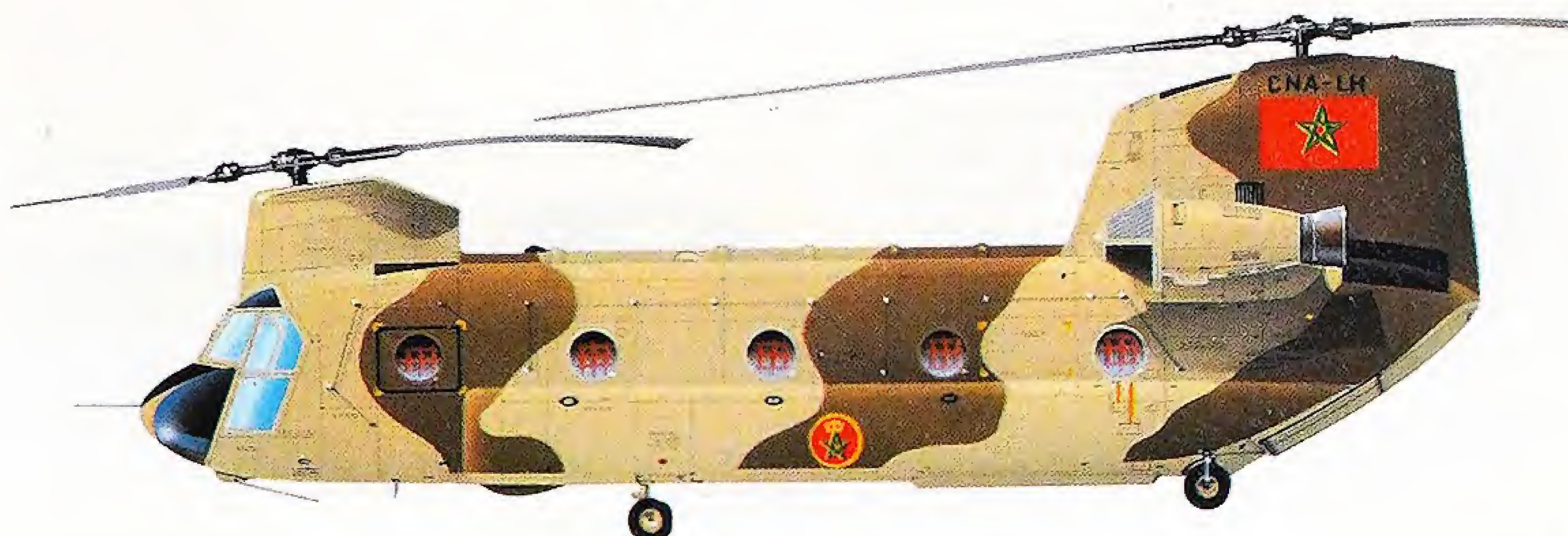
CH-47C, 12 SQUADRON, ROYAL AUSTRALIAN AIR FORCE, AMBERLEY, AUSTRALIA, EARLY 1980s

Eleven of 12 machines have been in service since they were delivered in 1974. A white top was added to the Olive Drab coloring of this example, but they have recently all been re-camouflaged in a green scheme. This machine is serialised A15 (indicating the Chinook) -008 (the eighth to be purchased).



CH-47C, ROYAL MOROCCAN AIR FORCE, RABAT, MOROCCO, 1988

A desert sand and stone camouflage was applied to the 12 Italian-built Chinooks delivered for logistic support along the country's borders. Note the five-letter code above the tail emblem.

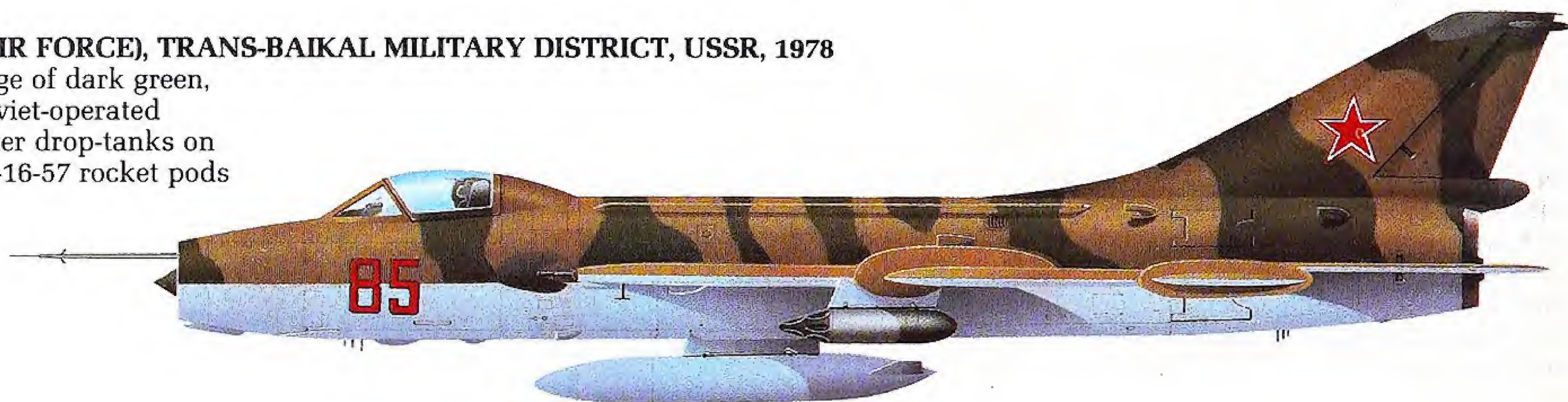


SUKHOI Su-7

Rugged simplicity is the Su-7's greatest asset, because as a combat aircraft it lacks range and weapon load, two vital factors as far as attack aircraft are concerned. Code-named "Fitter" by the West, the prototype of this single seat warplane flew in 1955, with production launched in 1958. Service variants include Su-7B, -7BM, -7BKL and the -7UM two-seat conversion trainer. Supplied to 12 air arms, including some in the Warsaw Pact. It was later developed into the current and more efficient swing-wing Su-17, -20 and -22 series.

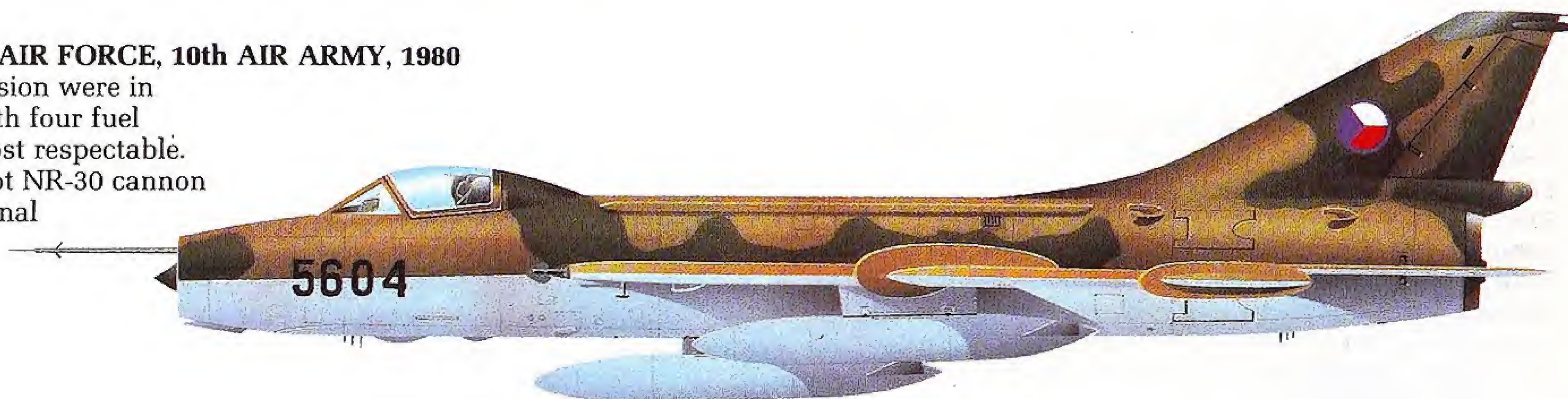
Su-7BMK, V-VS (SOVIET AIR FORCE), TRANS-BAIKAL MILITARY DISTRICT, USSR, 1978

Wearing a tactical camouflage of dark green, earth and light blue, this Soviet-operated "Fitter A" carries two 600-liter drop-tanks on the fuselage pylons and UV-16-57 rocket pods under the wings.



Su-7BMK, CZECHOSLOVAK AIR FORCE, 10th AIR ARMY, 1980

About 70 of the "Fitter A" version were in Czech service at this time. With four fuel tanks the range becomes almost respectable. The Aircraft has two wing-root NR-30 cannon to fight with, plus two additional underwing pylons fitted on late-production aircraft.



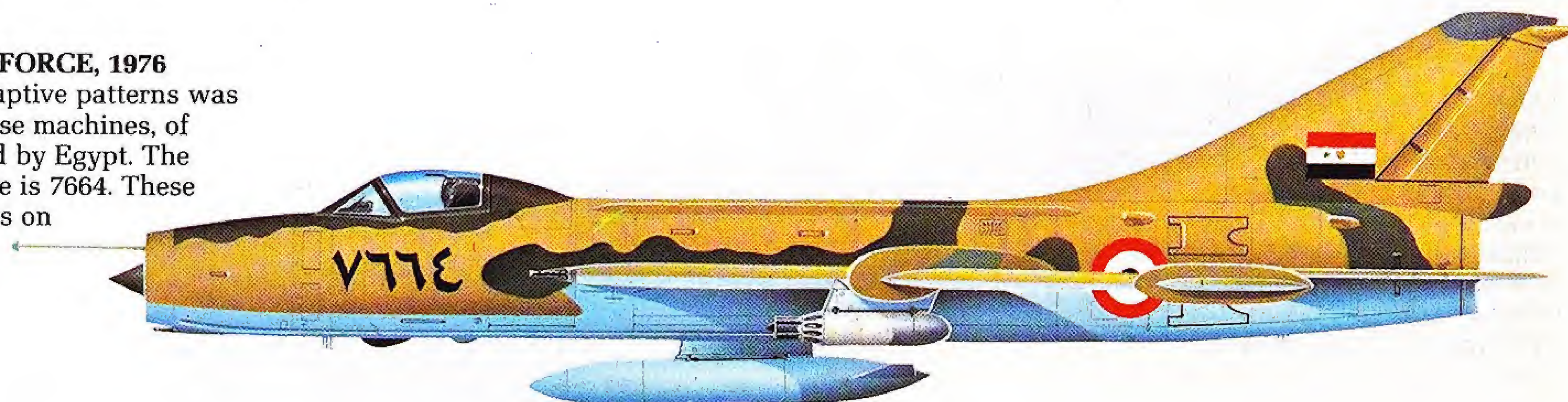
Su-7UM, EGYPTIAN AIR FORCE, CAIRO WEST AIRFIELD, EGYPT, 1976

To give conversion training on the type, the two-seat -7UM was produced. The instructor in the rear seat uses a periscope to see ahead, but his view remains limited. "Moujik" (peasant) is the West's name for the trainer version.



Su-7BM, EGYPTIAN AIR FORCE, 1976

Desert camouflage in disruptive patterns was the standard finish for these machines, of which some 120 were used by Egypt. The Arabic number on the nose is 7664. These aircraft made many attacks on Israeli ground forces during the Yom Kippur war of 1973.



Su-7BM, ALGERIAN AIR FORCE, 1977

Another of the Soviet Union's Middle Eastern export clients, Algeria received about 20 of the "Fitter A" version. The pod at the base of the rudder is the tail parachute housing; by the wing-root gun is a steel anti-blast panel to protect the fuselage skin.

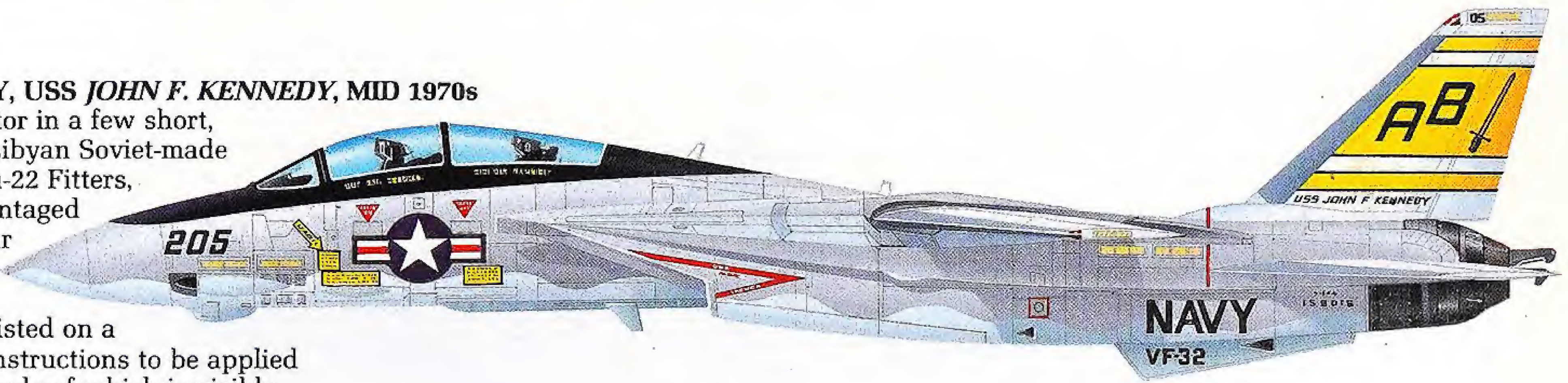


GRUMMAN F-14 TOMCAT

Latest and most powerful of Grumman's "cat" family, the F-14 entered US Navy service in October 1972 and more than 600 have been delivered. Current plans are centered on the F-14A Plus, which involves replacing the TF30 engines with more powerful and advanced F110 turbofans. A further upgrade, known as the F-14D, has the later engine as well as new radar and avionics, plus the AIM-54C digital Phoenix air-to-air missile. More than 400 A versions will be converted to Ds by 1998.

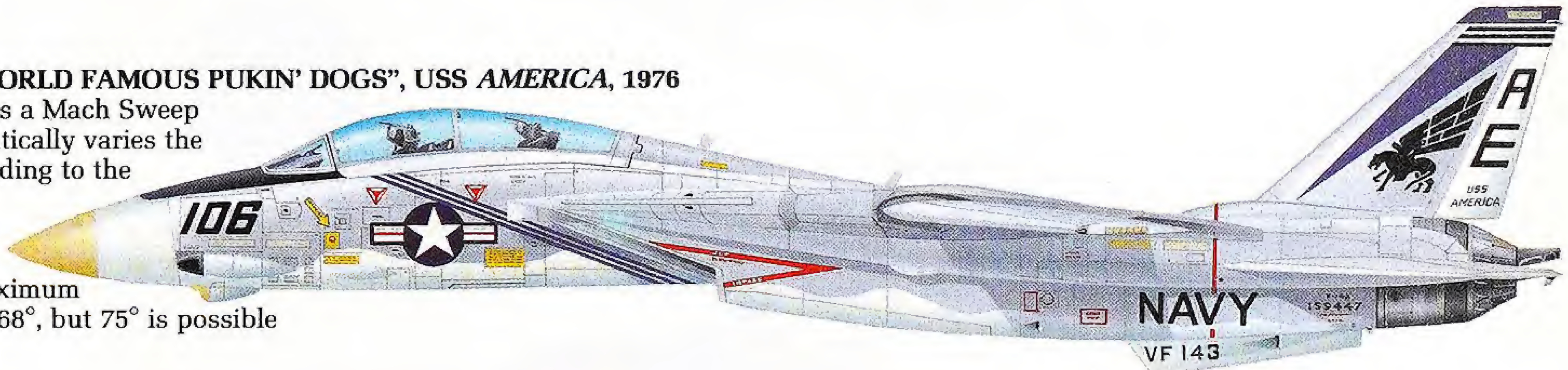
F-14A, VF-32, US NAVY, USS *JOHN F. KENNEDY*, MID 1970s

Combat proven and victor in a few short, sharp exchanges with Libyan Soviet-made MiG-23 Floggers and Su-22 Fitters, the F-14 is heavily advantaged with its long-range radar and associated Phoenix missiles. Ever safety-conscious, the Navy insisted on a whole range of stencil instructions to be applied to the airframe, an example of which is visible on the nose.



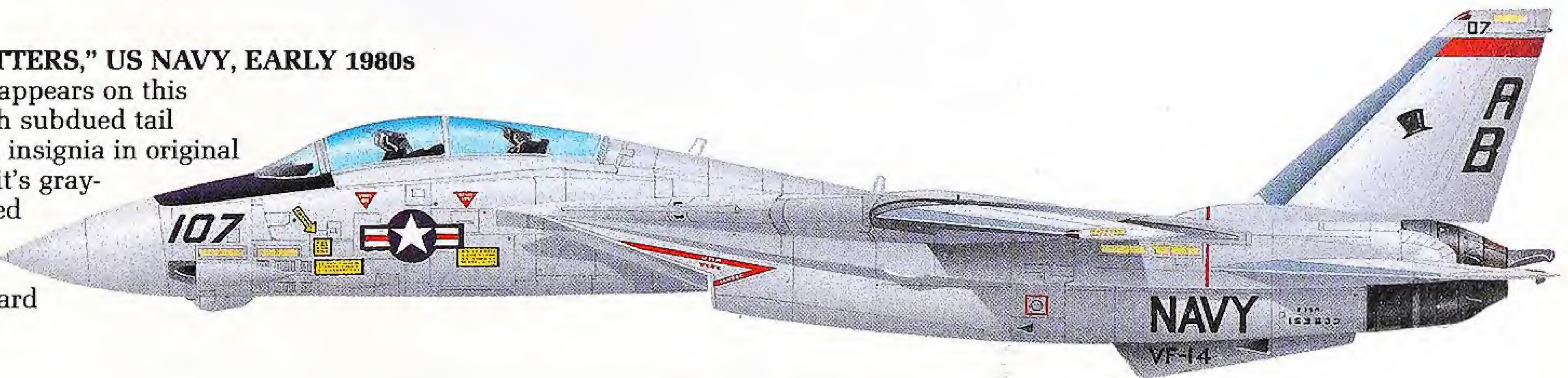
F-14A, VF-143 "THE WORLD FAMOUS PUKIN' DOGS", USS *AMERICA*, 1976

The Tomcat incorporates a Mach Sweep Programmer. This automatically varies the wing-sweep angle according to the mission requirements, such as efficient cruise (unswept), supersonic combat (swept), etc. Maximum in-flight sweep angle is 68°, but 75° is possible for deck stowage.



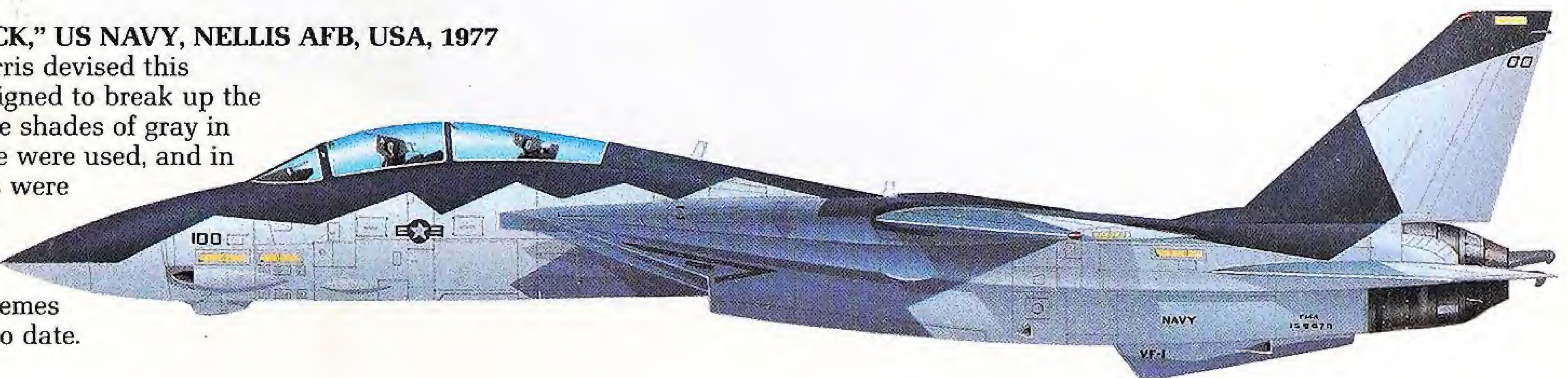
F-14A, VF-14 "TOP HATTERS," US NAVY, EARLY 1980s

Light Gull Gray overall appears on this aircraft, which has much subdued tail markings but retains all insignia in original coloring. In 1986 the unit's gray-painted aircraft displayed the hat in a white circle on the fin, with the carrier code on the inboard surfaces.



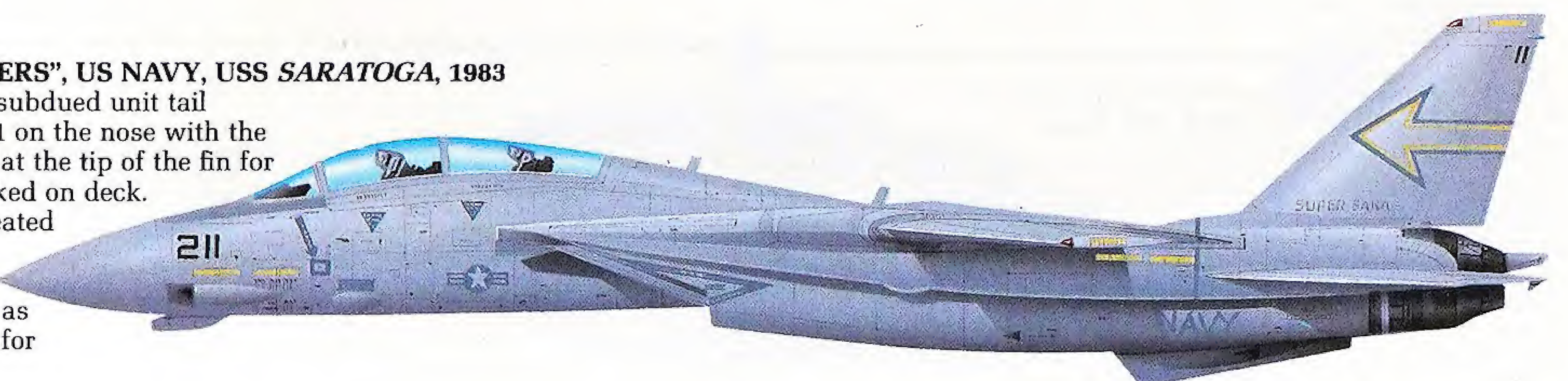
F-14A, VF-1 "WOLFPACK," US NAVY, NELLIS AFB, USA, 1977

Aviation artist Keith Ferris devised this experimental finish, designed to break up the outline of the F-14. Three shades of gray in hard-edged splinter style were used, and in some cases no markings were applied. Several aircraft took part in the trials, others coming from VF-2 and VX-4. The schemes have not been adopted to date.



F-14A, VF-103 "SLUGGERS", US NAVY, USS *SARATOGA*, 1983

Gray outline markings, subdued unit tail insignia, but a black 211 on the nose with the last two digits repeated at the tip of the fin for identification when parked on deck. The number is also repeated on the flaps, so that "flyco" on the island can identify the aircraft as it moves to the catapult for launching.



MIL Mi-24 HIND

Currently the largest anti-tank helicopter in the world, the Mi-24 bore the brunt of the hill fighting against the *Mujahideen* in Afghanistan, and many hundreds equip Soviet-Warsaw Pact helicopter regiments. Armament comprises either a 12.7mm MG in a chin turret or a twin-barrel 30mm cannon on the right-hand fuselage side, plus a range of air-to-ground ordnance carried under the stub wings. The double cockpit houses the gunner at the front with the pilot above and behind. Eight equipped troops can be carried in the cabin.

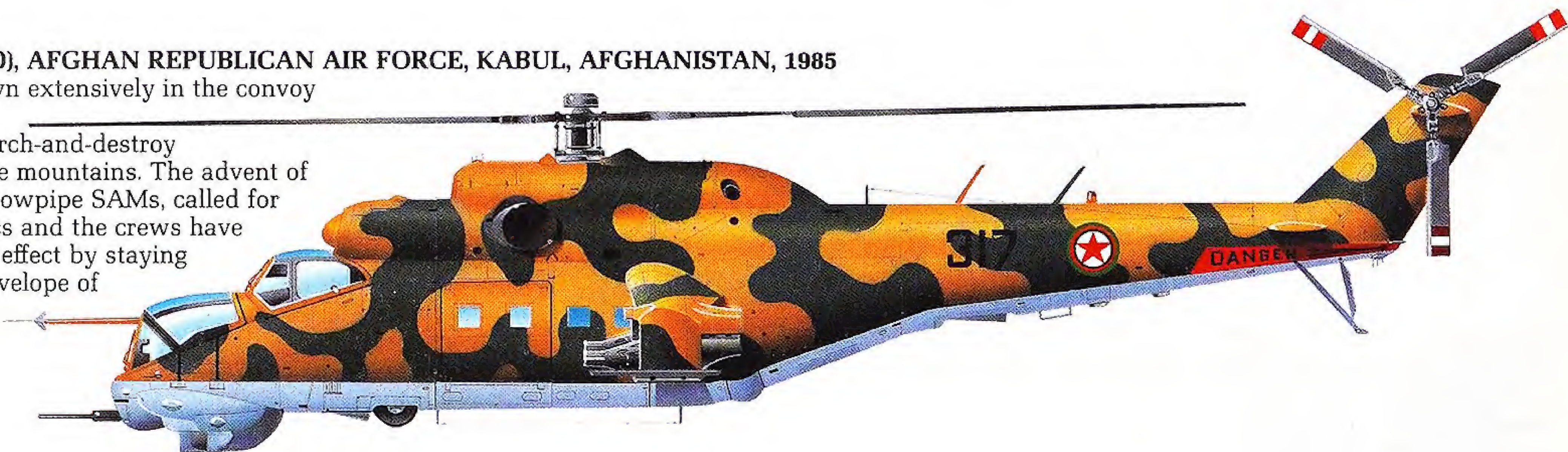
Mi-24 (HIND D), SOVIET ARMEISKAYA AVIATSIYA, USSR, 1984

Factory-applied sand and stone camouflage appears as standard on most Soviet-operated Hinds, although green sometimes replaces the darker color. A tail-rotor warning is applied on the rear fuselage, and on the boom is the aircraft number in yellow.



Mi-24 (HIND D), AFGHAN REPUBLICAN AIR FORCE, KABUL, AFGHANISTAN, 1985

Hinds are flown extensively in the convoy escort role as well as on search-and-destroy missions in the mountains. The advent of Stinger and Blowpipe SAMs, called for different tactics and the crews have put these into effect by staying outside the envelope of the missiles.



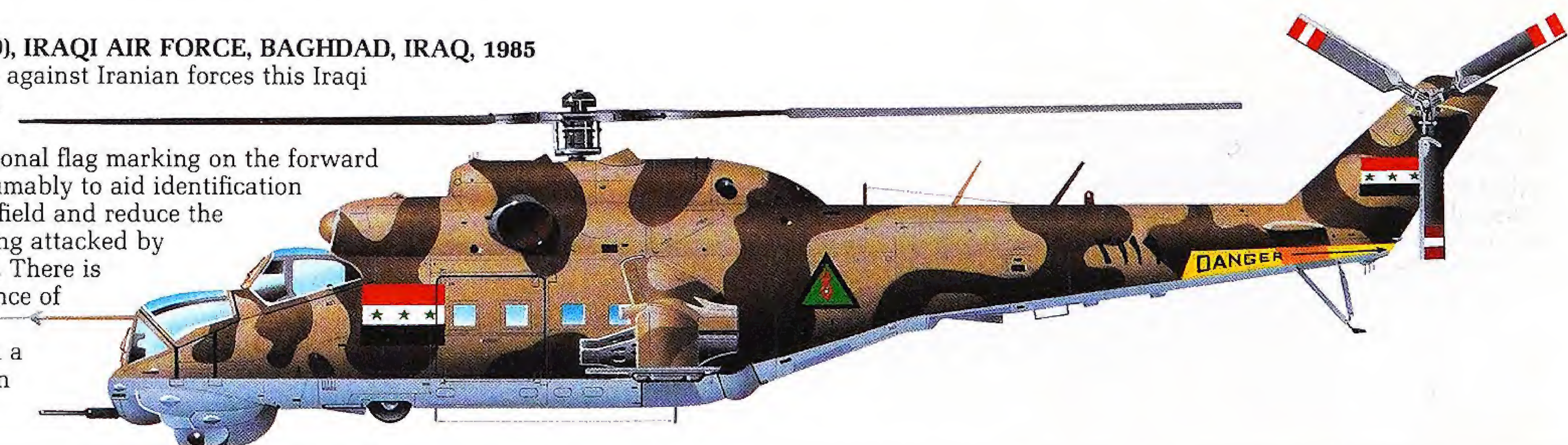
Mi-24 (HIND D), POLISH AIR FORCE, 1986

A darker color scheme is a feature of this and a number of other Polish Hinds. About 30 are reported to be in service and they have been seen carrying Aphid infra-red homing air-to-air missiles in addition to the standard weaponry.



Mi-24 (HIND D), IRAQI AIR FORCE, BAGHDAD, IRAQ, 1985

For operations against Iranian forces this Iraqi Hind has been given an additional national flag marking on the forward fuselage, presumably to aid identification over the battlefield and reduce the chances of being attacked by friendly forces. There is only one instance of an Iraqi Hind shooting down a passing Iranian Phantom.



DASSAULT MIRAGE F.1

Like its delta-winged Mirage III predecessor, the Mirage F.1 has enjoyed considerable export success and now flies with 10 air arms as well as with the French Air Force. It was developed as a multi-role aircraft. Main variants are a dedicated fighter (F.1C), an all-weather fighter and ground-attack (F.1E) and trainer (F.1B). The type has been flown on combat operations in the Middle East with the Iraqi AF and in North Africa with the Moroccan AF. Production exceeds 730.

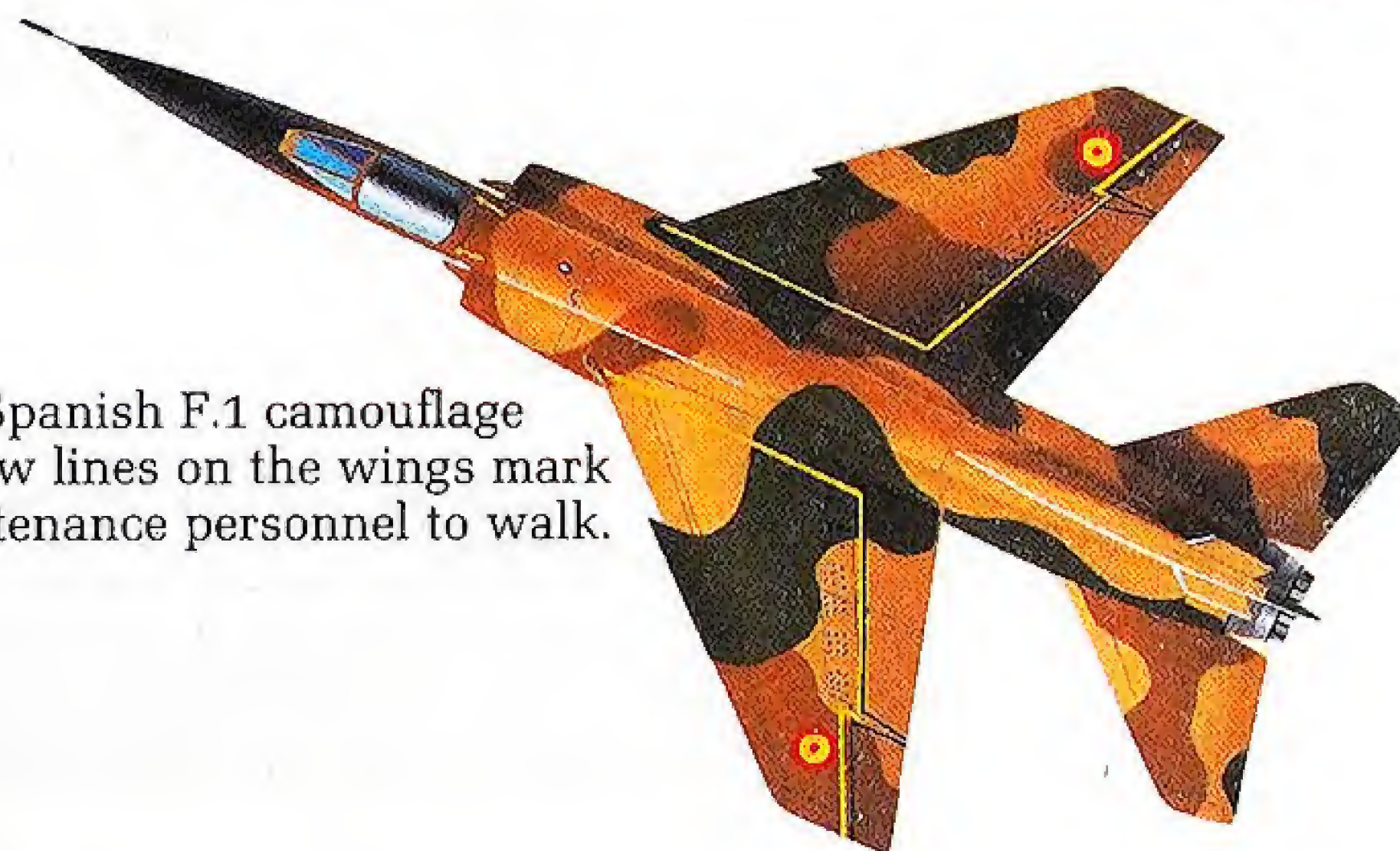
F.1CE, ESCUADRON 141, ALA DE CAZA 14, SPANISH AIR FORCE, ALBACETE, SPAIN, 1980

May 1975 and 04 was one of the first batch of aircraft delivered to Spain, the second nation to order the interceptor. Internal armament of the F.1 consists of two 30mm cannon located under the intakes.

Ala 14 badge applied to the engine intake area of the Spanish aircraft. It shows Don Quijote saluting a flight of Mirages.

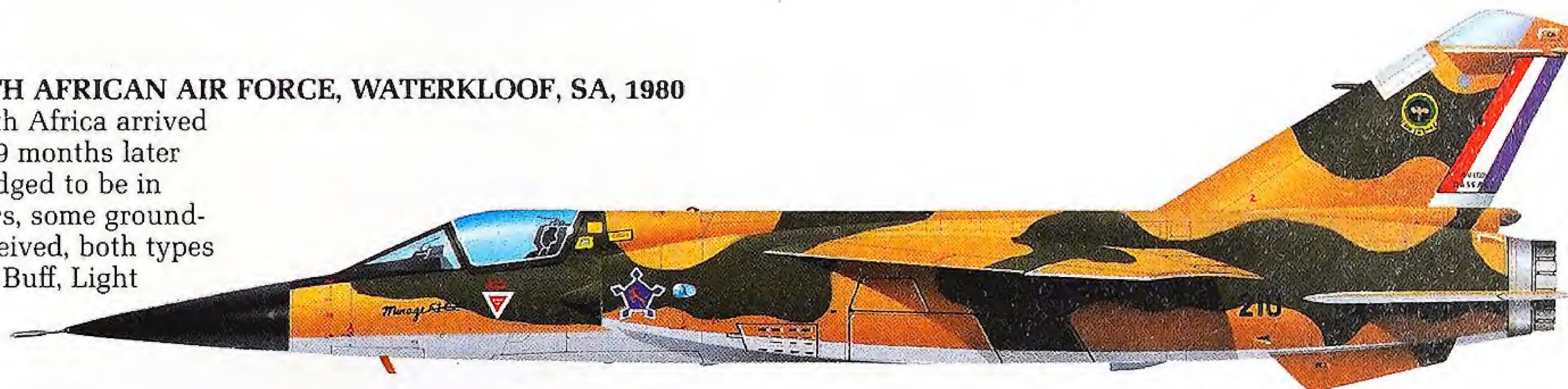


Plan view of the Spanish F.1 camouflage scheme. The yellow lines on the wings mark the limit for maintenance personnel to walk.



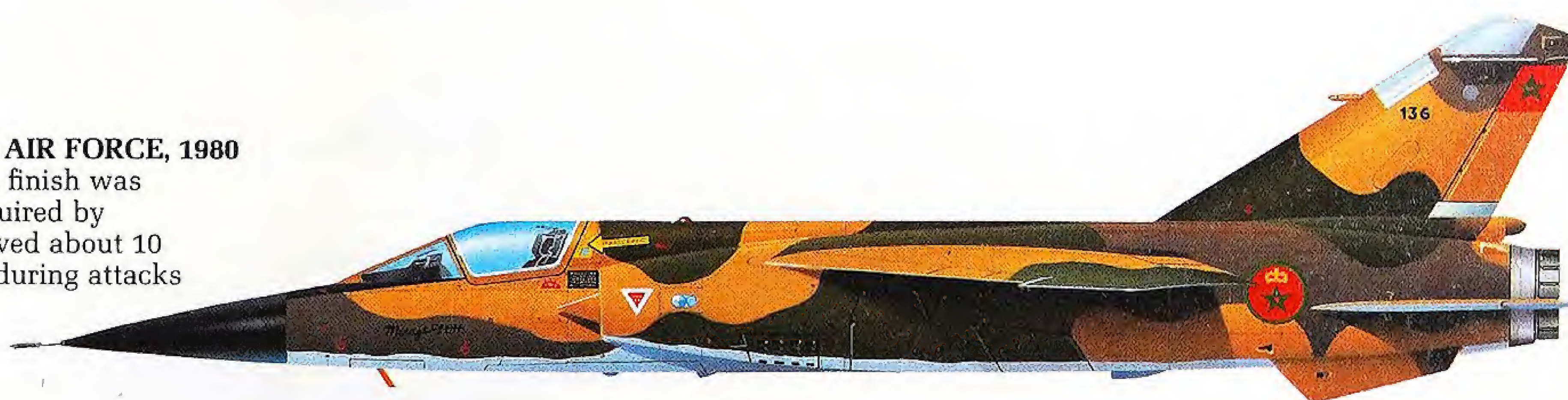
F.1CZ, 3 SQUADRON, SOUTH AFRICAN AIR FORCE, WATERKLOOF, SA, 1980

The first Mirage F.1s for South Africa arrived in April 1975, but not until 19 months later were they publicly acknowledged to be in service. As well as the fighters, some ground-attack versions were also received, both types having this Olive Drab, Deep Buff, Light Admiralty Gray scheme.



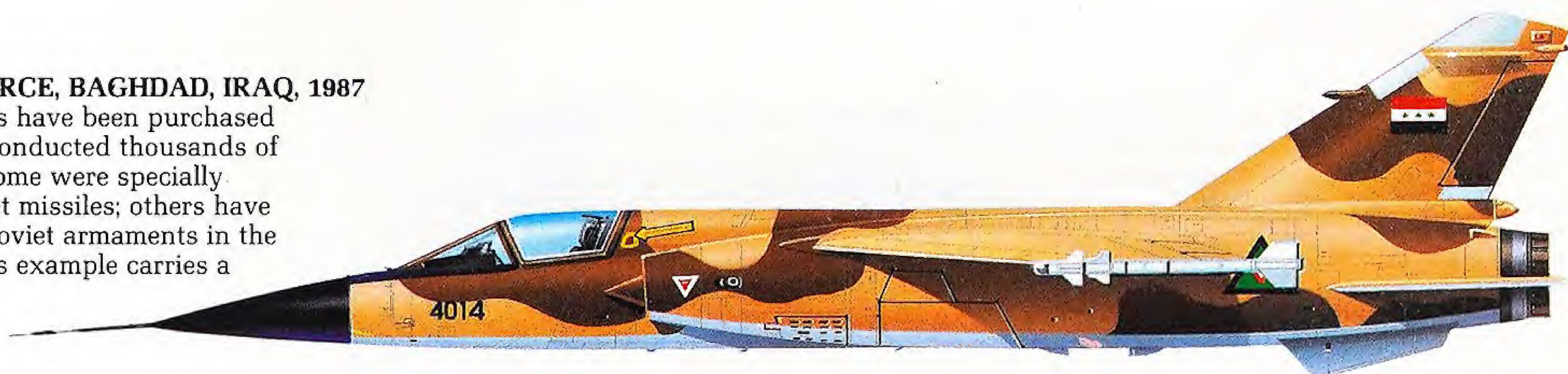
F.1CH, ROYAL MOROCCAN AIR FORCE, 1980

A basic green, brown and tan finish was applied to the 50 Mirages acquired by Morocco from 1978. It is believed about 10 have been lost to ground fire during attacks on Polisario guerillas.



F.1EQ, IRAQI AIR FORCE, BAGHDAD, IRAQ, 1987

More than 120 Mirages have been purchased by Iraq and the type conducted thousands of sorties against Iran. Some were specially equipped to fire Exocet missiles; others have been adapted to use Soviet armaments in the air-to-ground role. This example carries a French Magic AAM.

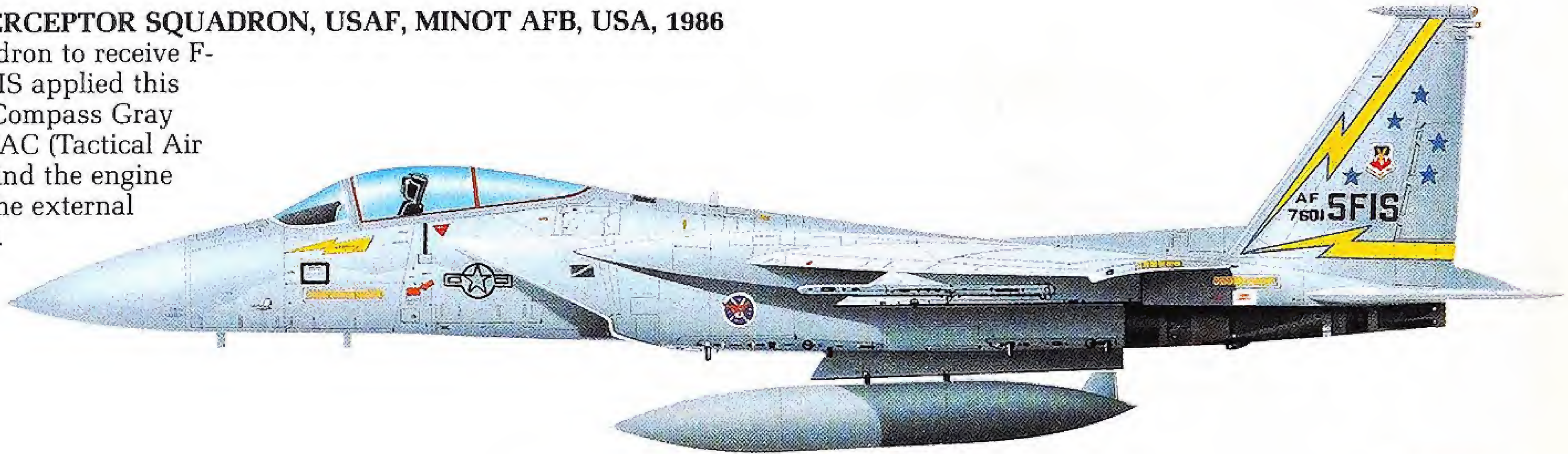


MCDONNELL DOUGLAS F-15 EAGLE

Designed to replace the Phantom, the F-15 is the USAF's primary air-superiority fighter and planned production to date of all models totals 1266 aircraft in addition to 20 development machines. Since the prototype flew on 27 July 1972, five versions have been produced, the F-15A and C single-seaters, F-15B and D two-seaters and the F-15E two seat dual-role fighter and interdiction aircraft. Eagles also fly with the air forces of Japan, Saudi Arabia and Israel.

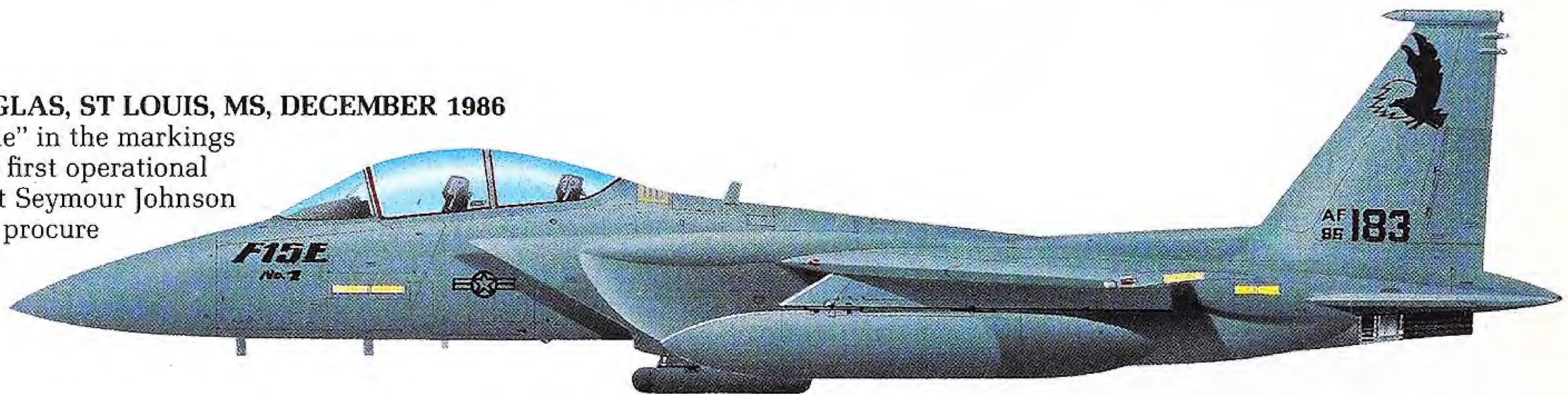
F-15A, 5th FIGHTER INTERCEPTOR SQUADRON, USAF, MINOT AFB, USA, 1986

Third US air defense squadron to receive F-15s in June 1985, the 5th FIS applied this decorative finish over the Compass Gray scheme. On the fin is the TAC (Tactical Air Command) badge and behind the engine intake is the unit badge. The external fuel tank holds 600 US gal.



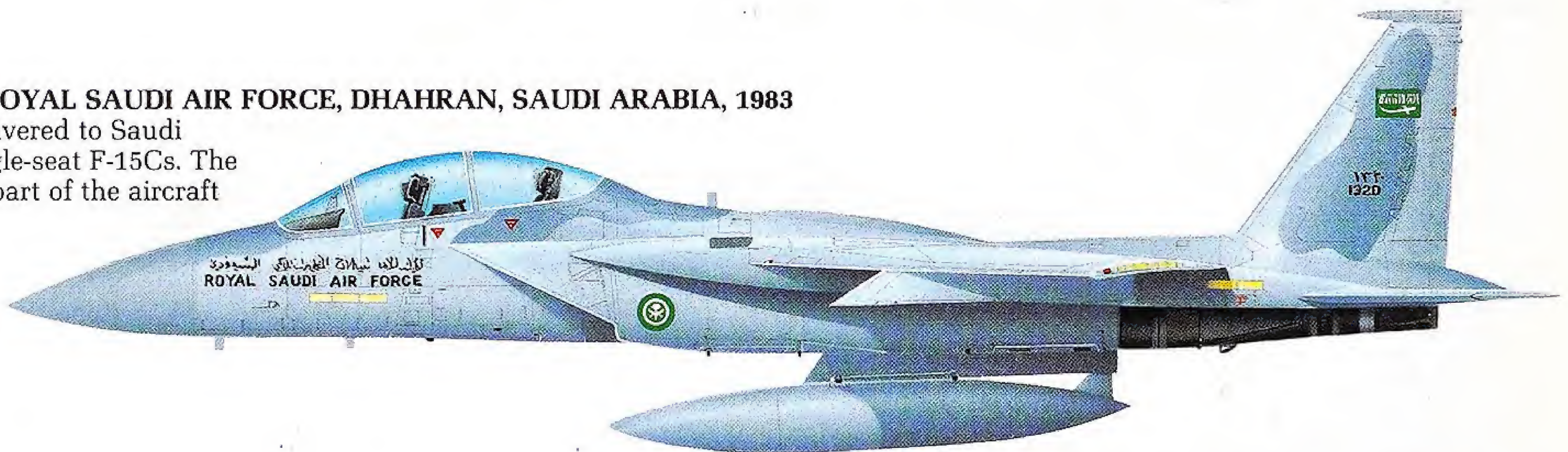
F-15E, McDONNELL DOUGLAS, ST LOUIS, MS, DECEMBER 1986

First prototype "Strike Eagle" in the markings applied for early trials. The first operational USAF unit is the 4th TFW at Seymour Johnson AFB, SC. USAF plans are to procure a total of 392 F-15Es.



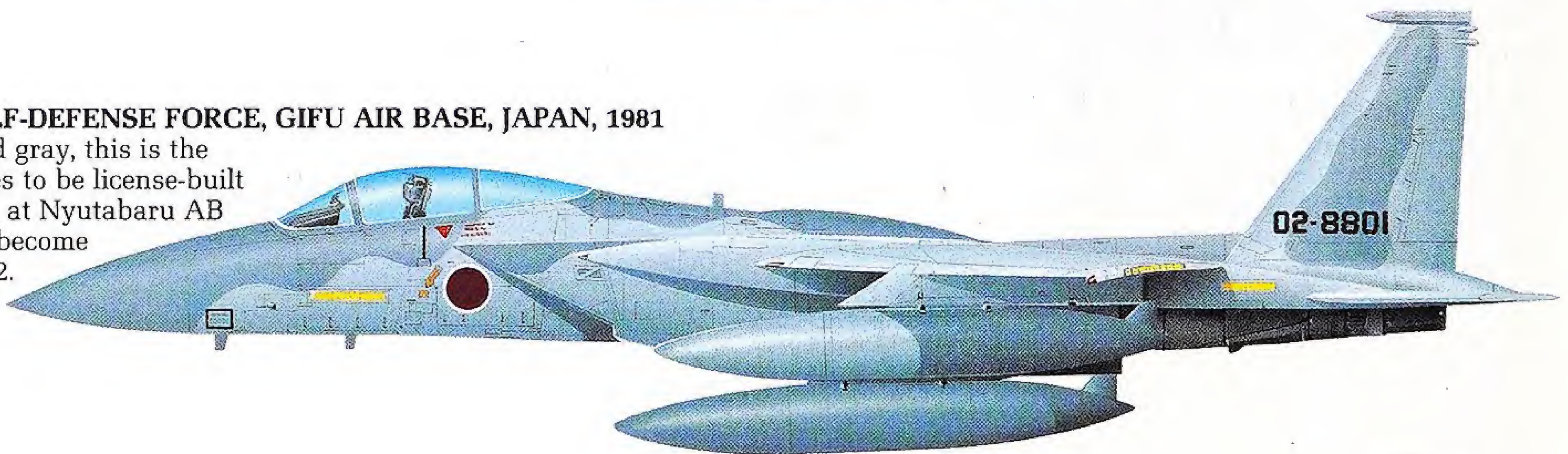
F-15D, 13 SQUADRON, ROYAL SAUDI AIR FORCE, DHAHRAN, SAUDI ARABIA, 1983

One of 15 two-seaters delivered to Saudi Arabia along with 47 single-seat F-15Cs. The squadron number forms part of the aircraft number on the fin.



F-15J, JAPANESE AIR SELF-DEFENSE FORCE, GIFU AIR BASE, JAPAN, 1981

Finished in counter-shaded gray, this is the first of 86 single-seat Eagles to be license-built by Mitsubishi. No 202 Sqn at Nyutabaru AB was the first JASDF unit to become operational on 1 April 1982.



F-15A, 133 SQUADRON, ISRAEL DEFENSE FORCE/AIR FORCE, ISRAEL, 1977

One of the first F-15s to be delivered to the IDF/AF, this example carries Sparrow and Sidewinder missiles, both weapons used to some effect against Syrian MiGs.



LOCKHEED S-3 VIKING

The standard fixed-wing carrier-based aircraft with US Navy ASW squadrons, the Viking is a highly advanced sub-hunting "computer with wings." It entered service in 1974 and production ended in 1978 following completion of the 187th aircraft. For carrier stowage, the wings and fin fold and there is also a retractable MAD boom at the tail and a refuelling probe above the cockpit. S-3Bs are modified S-3As while the US-3A is a Carrier On-Board Delivery (COD) version.

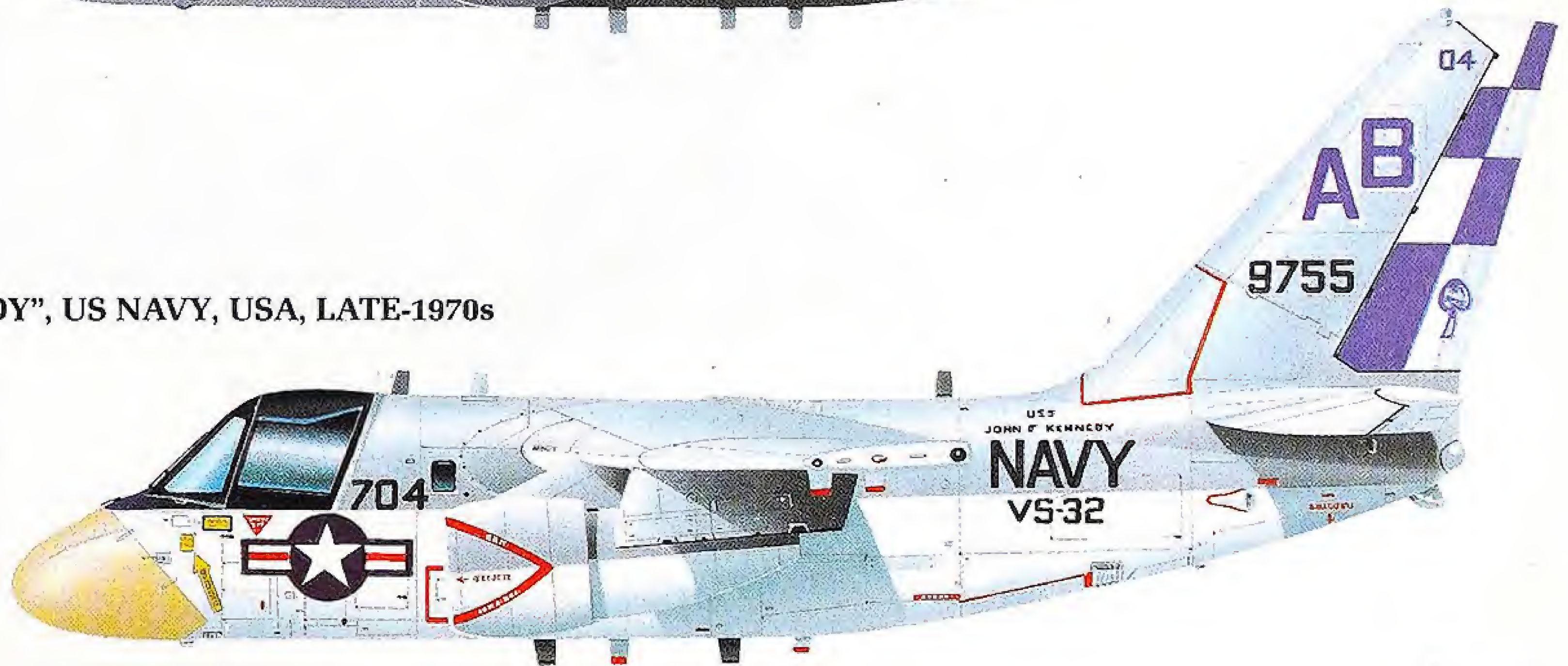
S-3A, VS-38, CVW-2, USS "RANGER", US NAVY, USA, 1987

Light Compass Gray is the latest scheme for USN Vikings and bright colors have been eliminated from all surfaces (even the important rescue stenciling has been toned down).



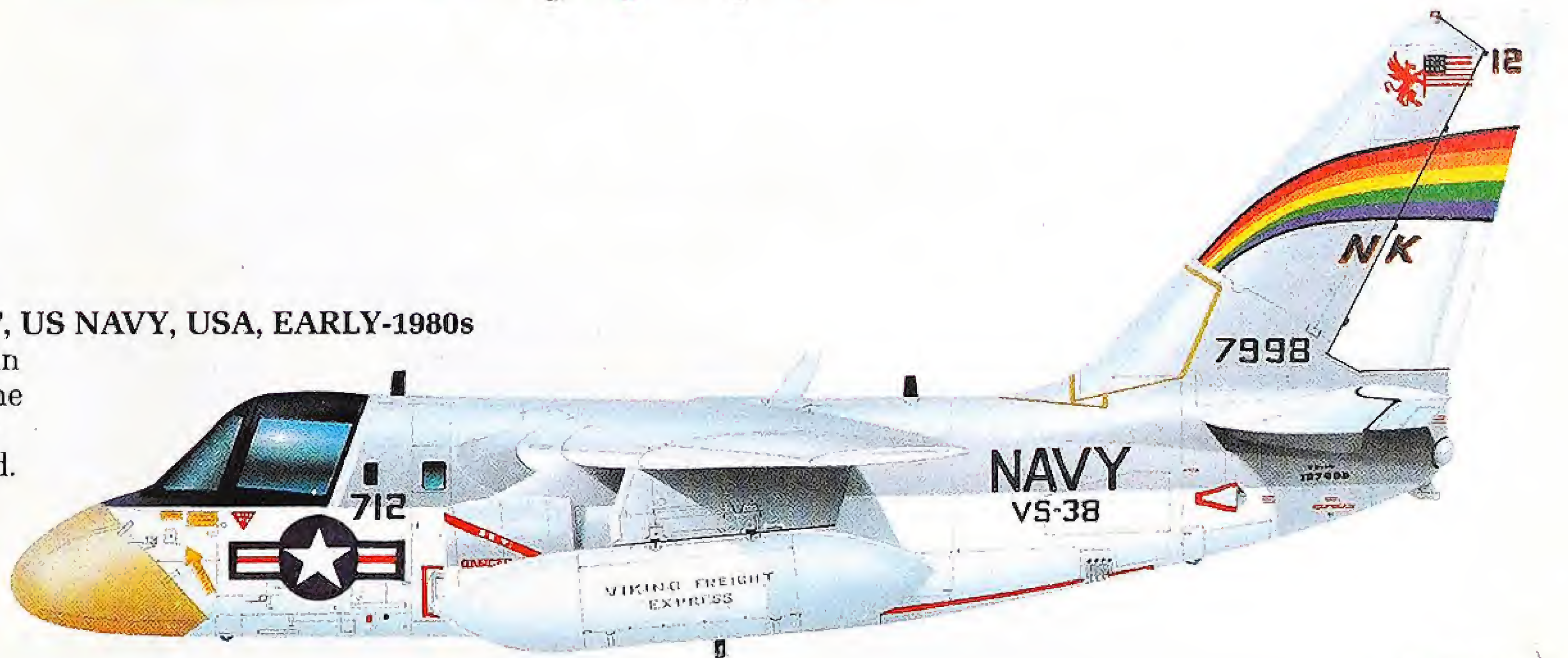
S-3A, VS-32, CVW-1, USS "JOHN F KENNEDY", US NAVY, USA, LATE-1970s

The tail codes relate to the Carrier Air Wing to which the unit is assigned, not to the squadron. In this case AB would also have been applied to aircraft of other units in the same ship.



US-3A, VS-38, CVW-14, USS "CORAL SEA", US NAVY, USA, EARLY-1980s

This cargo or COD version was first trialed in 1980 and four were in service by 1983. On the wing pylons are streamlined freight pods, in this case appropriately named and decorated.



S-3A, VS-41, US NAVY, 1976

The US Bicentennial military celebrations in 1976 resulted in many colorful schemes being applied to aircraft and this Viking continued its operational role painted in a bright one-off finish.



BRITISH AEROSPACE HAWK

Firm contracts for more than 350 Hawk advanced trainer and attack aircraft have been placed since the type made its first flight on 21 August 1974. The RAF introduced the Hawk into service in November 1976 to replace the Gnat and Hunter for advanced flying, weapon and navigation training. Orders were subsequently placed by Finland, Indonesia, Kenya, Zimbabwe, Abu Dhabi, Kuwait, Dubai, Saudi Arabia, Switzerland and the UAE. Some 300 T-45 Goshawks have been ordered for the US Navy and the Hawk 200 single-seater has been developed.

T Mk 1, NO 1 TACTICAL WEAPONS UNIT, RAF BRAWDY, UK, 1980

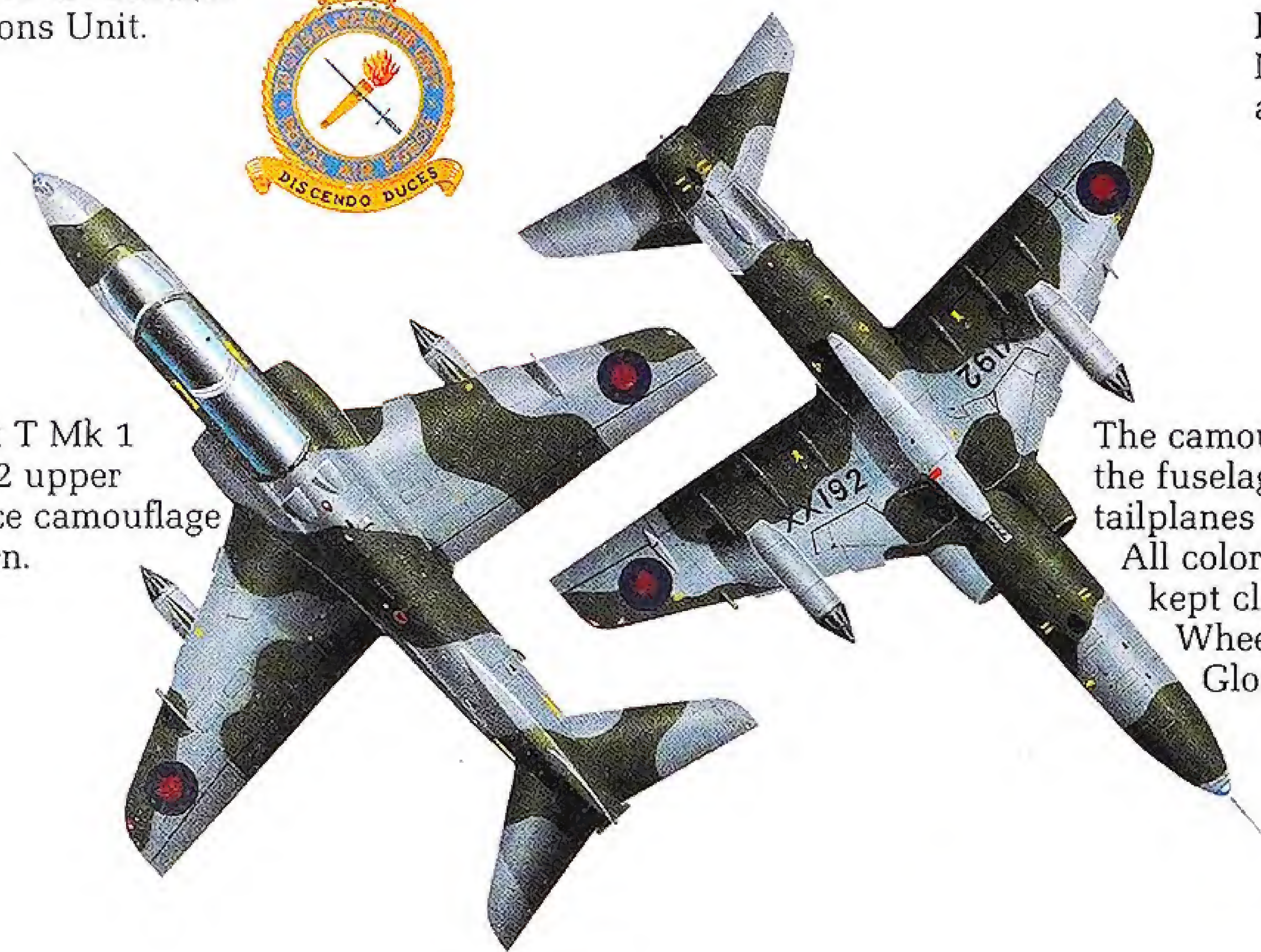
Bearing the "shadow squadron" insignia of 234 Sqn, this aircraft has the standard matt Dark Green and Dark Sea Gray camouflage for the low-level tactical training role. The serial number is repeated in white on the fin.



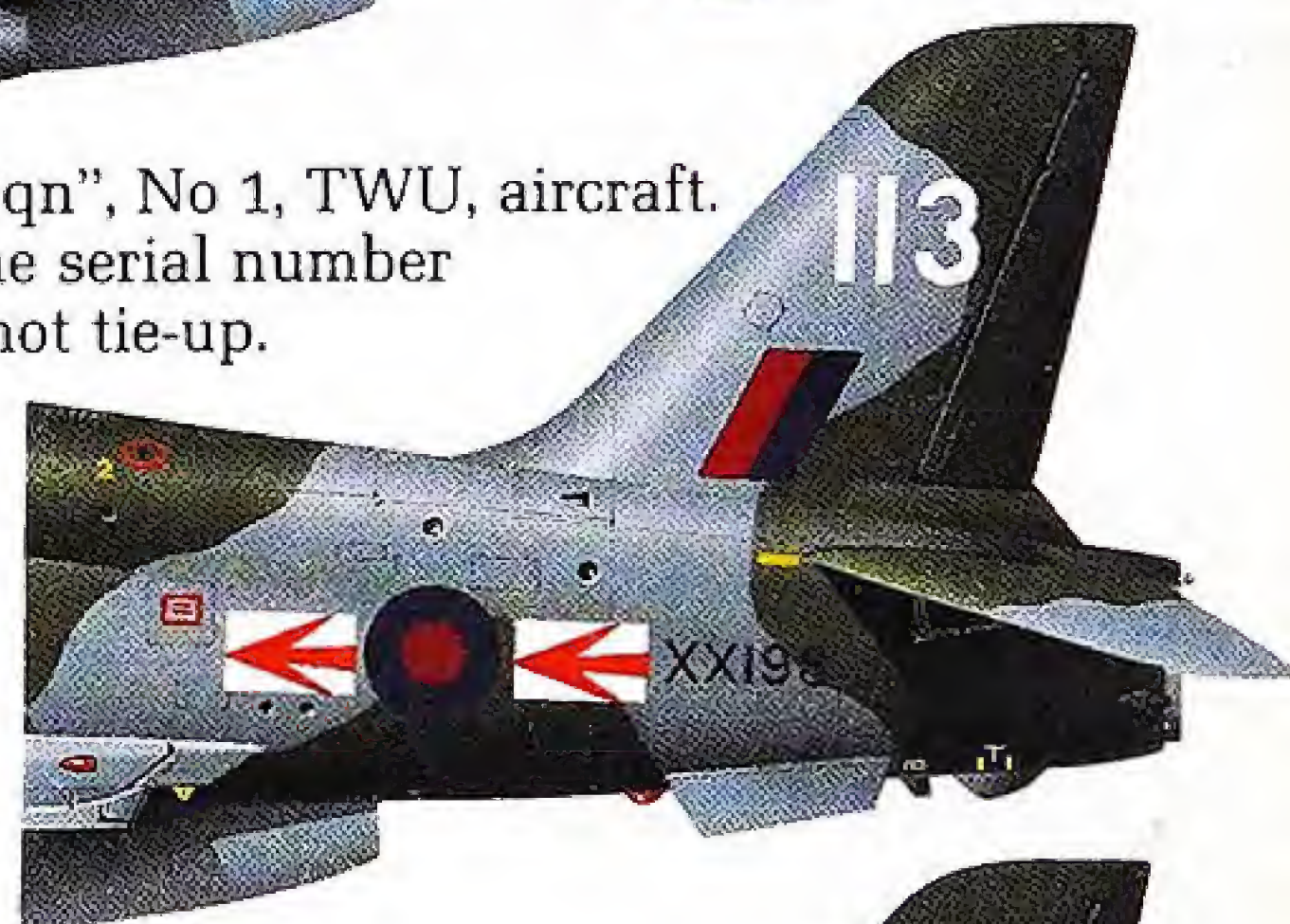
Crest of the Tactical Weapons Unit.



Hawk T Mk 1 XX192 upper surface camouflage pattern.



Rear fuselage of a "79 Sqn", No 1, TWU, aircraft. Note that in this case the serial number and the fin number do not tie-up.



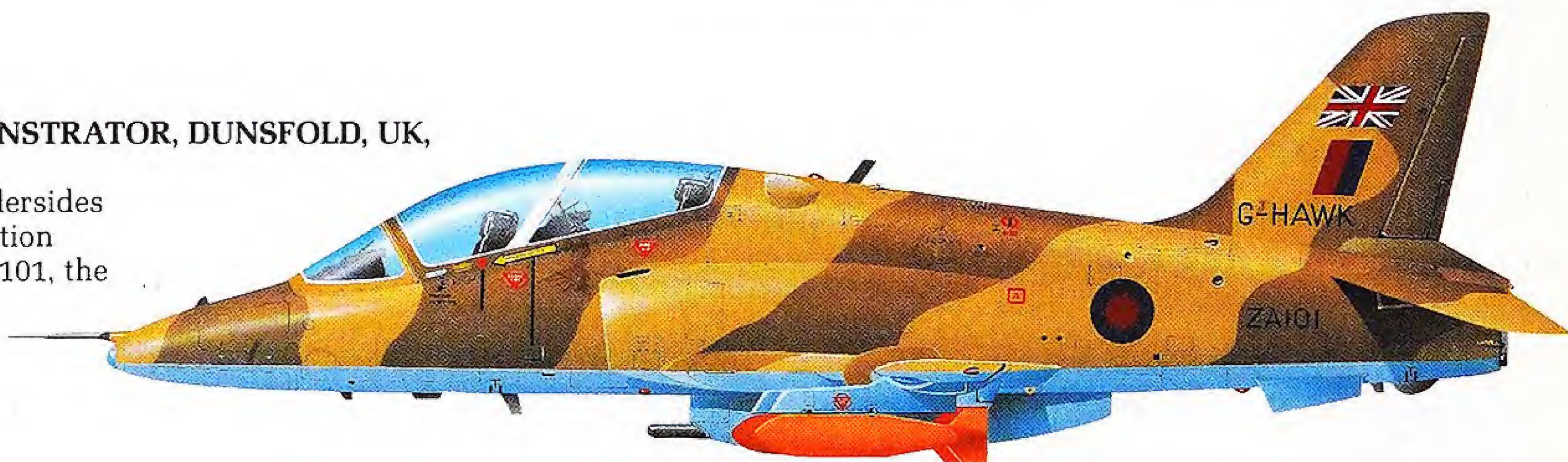
The camouflage wraps around the fuselage, wing and tailplanes to give an overall scheme. All color demarcation is kept clear of access panels. Wheel bay color is Gloss White.



Across the Bristol Channel from the Welsh base at Brawdy, Chivenor is the home of "63 Sqn," No 2, TWU, one of whose aircraft is seen here.

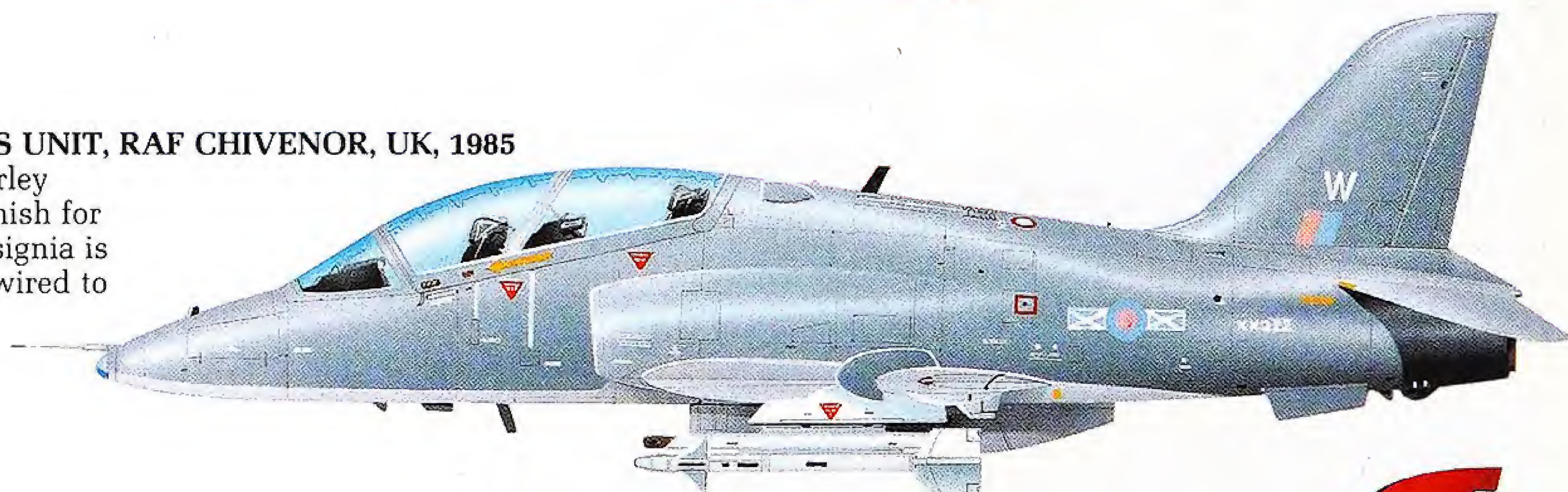
Mk 50, BRITISH AEROSPACE DEMONSTRATOR, DUNSFOLD, UK, LATE 1970s

Dark Earth, Stone and Azure Blue undersides were applied for a series of demonstration flights in the Middle East. Serialized ZA101, the aircraft also has an out-of-sequence registration G-HAWK.



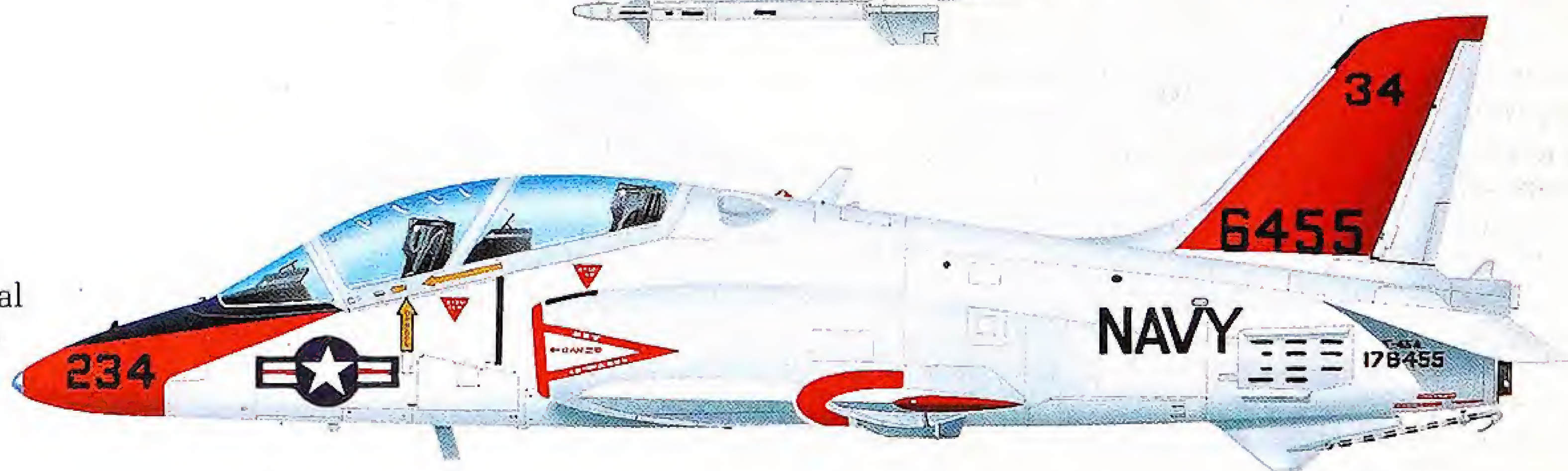
T Mk 1A, NO 2 TACTICAL WEAPONS UNIT, RAF CHIVENOR, UK, 1985

Satin-finish Medium Sea Gray with Barley Gray undersides is the low-visibility finish for this Sidewinder-armed aircraft. The insignia is pink and light blue. Note that Hawks wired to fire Sidewinder missiles are designated T Mk 1A.



T-45 GOSHAWK, US NAVY, 1987

Early impression of the Gloss White and Orange-colored future Navy trainer. The actual machine has undergone a number of changes to the airframe since this drawing, but the colors are believed to be substantially correct.

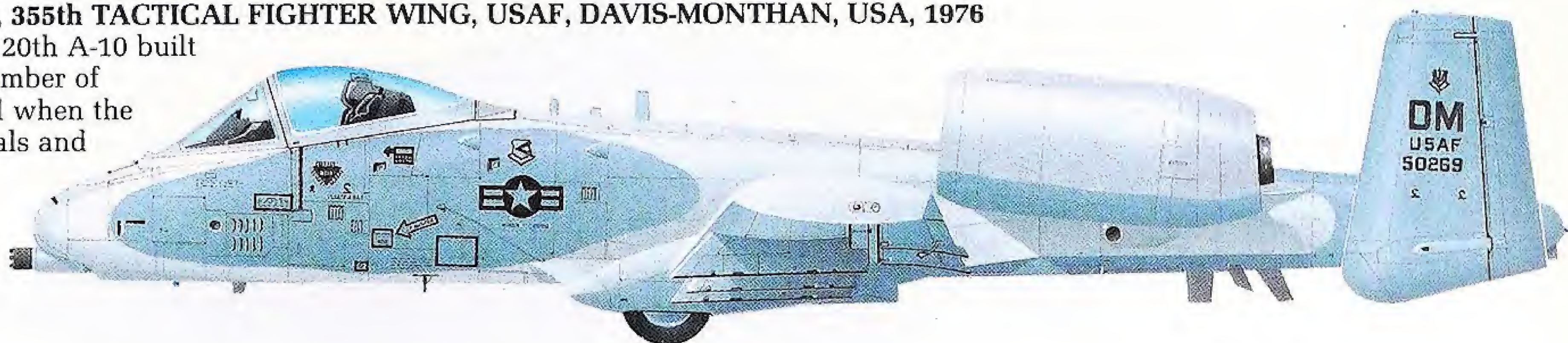


FAIRCHILD A-10

From almost any angle the A-10 has an easily-recognizable shape. The unorthodox positioning of the two engines to reduce the effect of heat emissions attracting infra-red missiles, the widely-spaced fins, and the massive wing able to carry some seven tons of ordnance are features which make the aircraft unique. The USAF received 713 by 1984 and these equip close-support wings in Europe, South Korea and the USA. Extensive armor plating protects the aircraft's vital parts, including the pilot.

A-10A, 333rd SQUADRON, 355th TACTICAL FIGHTER WING, USAF, DAVIS-MONTHAN, USA, 1976

Serialized 75-269, this is the 20th A-10 built and carries the first of a number of "standard" finishes, applied when the aircraft was undergoing trials and tests, some of which were aimed at determining the most effective scheme to adopt; 17 aircraft were finished like this.



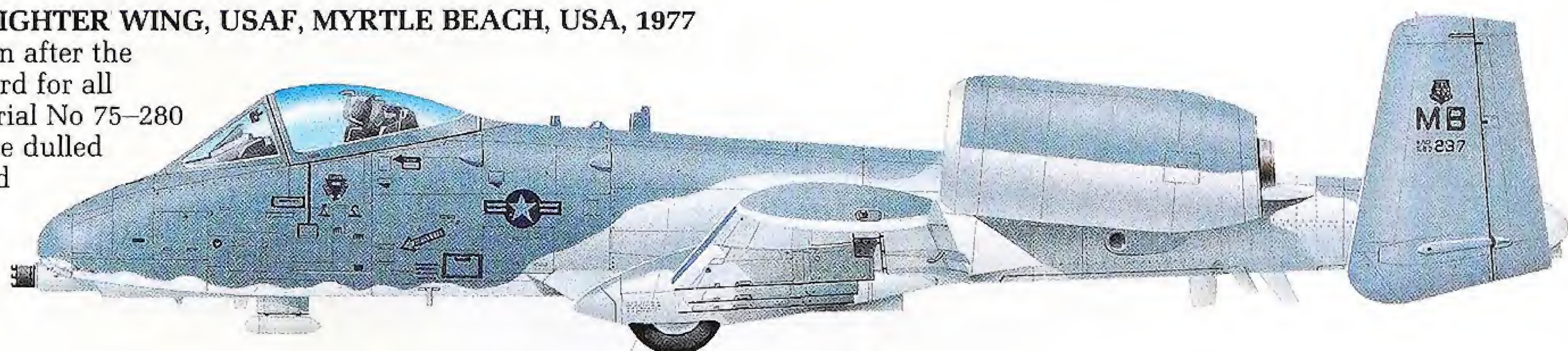
A-10A, 57th TACTICAL TRAINING WING, USAF, NELLIS AFB, USA, 1977

A random pattern of two greens and a brown daubed over the light gray base color was an experimental scheme trialed in a "Jaws II" exercise held in November 1977. It was not adopted.



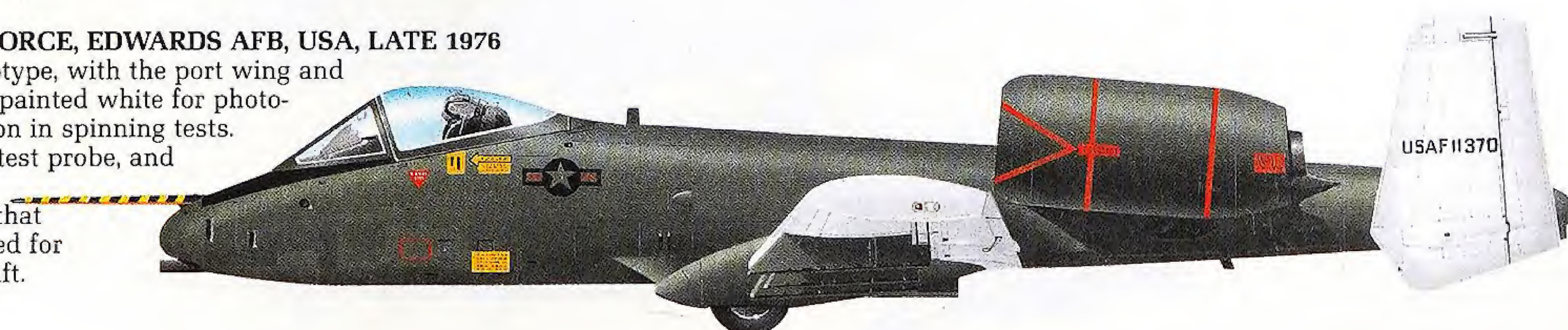
A-10A, 354th TACTICAL FIGHTER WING, USAF, MYRTLE BEACH, USA, 1977

This was the scheme chosen after the camouflage trials as standard for all production aircraft from serial No 75-280 onwards. All markings were dulled with black outline "star and bar," badges, rescue and maintenance stenciling and the unit/base code on the fin.



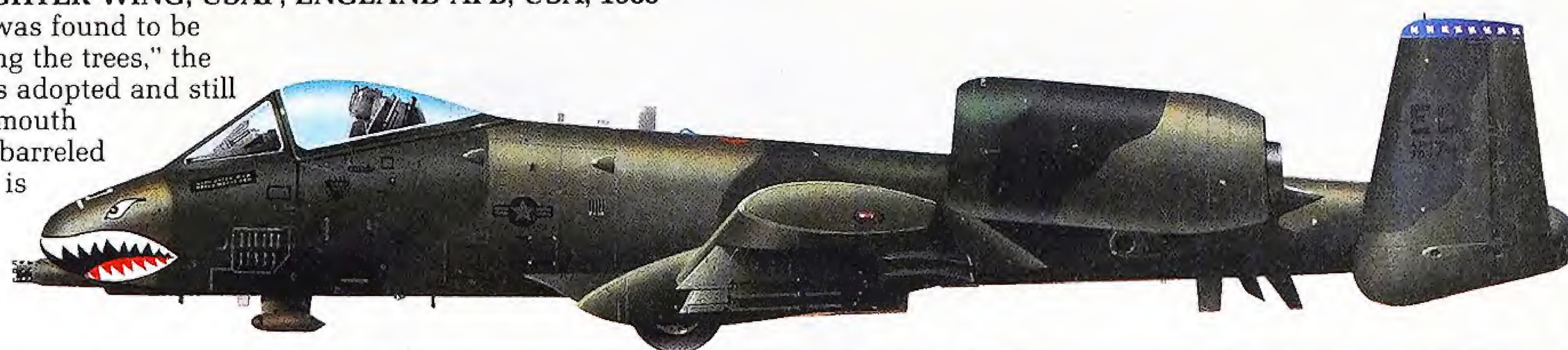
YA-10, US AIR FORCE, EDWARDS AFB, USA, LATE 1976

The second prototype, with the port wing and outside port fins painted white for photographic orientation in spinning tests. On the nose is a test probe, and the fin shape is different from that eventually adopted for production aircraft.



A-10A, 23rd TACTICAL FIGHTER WING, USAF, ENGLAND AFB, USA, 1983

When the light gray finish was found to be too contrasting "down among the trees," the so-called Lizard scheme was adopted and still exists on A-10s. The shark-mouth surrounds the 30mm seven-barreled cannon, while on the fin tip is the squadron color. Lizard color reference to FS595a: Green (34103), Green (34092), Gray (36081).

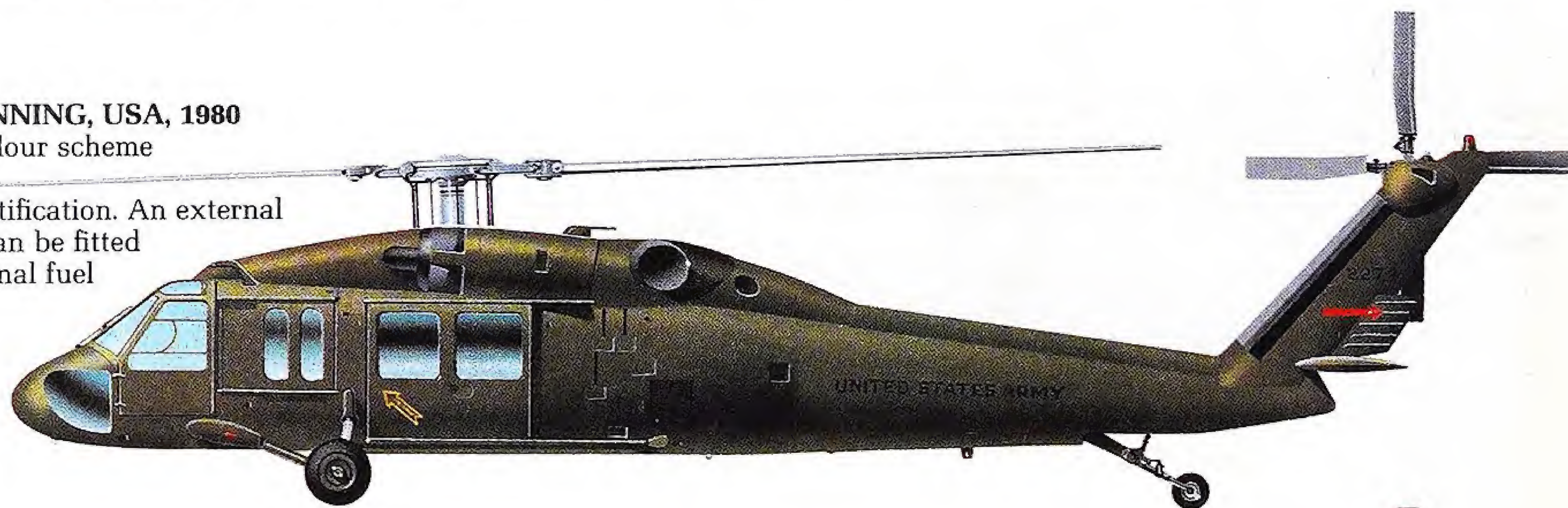


SIKORSKY H-60

Intended as a combat survivable replacement for the thousands of UH-1 Hueys in the US Army, the prototype UH-60 flew on 17 October 1974 and entered service in 1978. While the US Army alone requires 2253 by the year 2007, the Navy plans to order 432 SH-60 Seahawk versions for ASW and SAR duties and current export orders stand at over 100 for 11 countries. US Army Black Hawks can carry 11 soldiers or an 8000lb underslung load.

UH-60A, US ARMY, FORT BENNING, USA, 1980

Dark Olive Drab is the basic colour scheme applied to all Army Black Hawks and few carry unit identification. An external stores support system (ESSS) can be fitted allowing the carriage of additional fuel or weapons on four pylons.



UH-60A, 421ST AVIATION BATTALION, US ARMY, W GERMANY, 1983

In a medevac-configuration, a four-litter assembly is mounted around a centrally-located pedestal which rotates to facilitate loading and unloading. Black Hawks received their baptism of fire during the US invasion of Grenada in 1983, sustaining ground-fire damage on a number of occasions. Of 32 deployed, only one was lost.



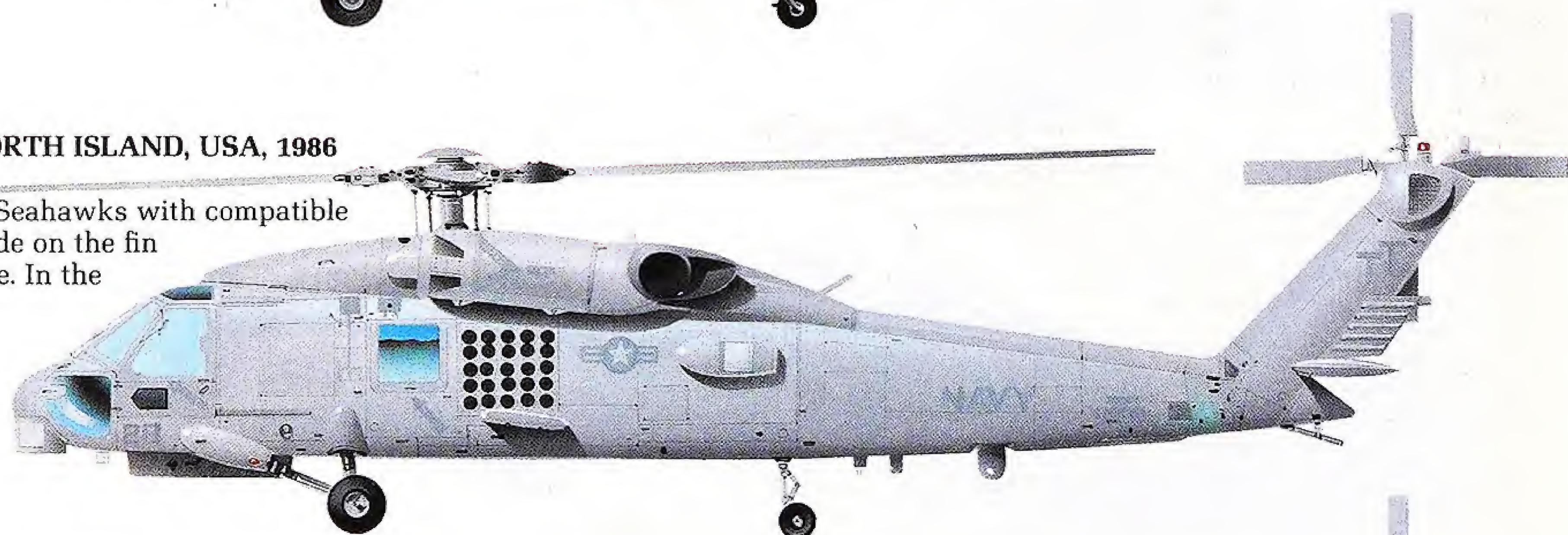
SH-60B, SEAHAWK PROTOTYPE FOR US NAVY, STRATFORD, USA, 1980

Painted in the then-standard Gull Gray and White USN colors, the first Seahawk flew on 12 December 1979. It carries a dummy Mk 46 lightweight torpedo and has an instrumented probe in the nose. Just in front of the fuselage insignia is the sonobuoy launch rack while behind the marking is the port-side AN/ALQ-142 electronic support measures aerial.



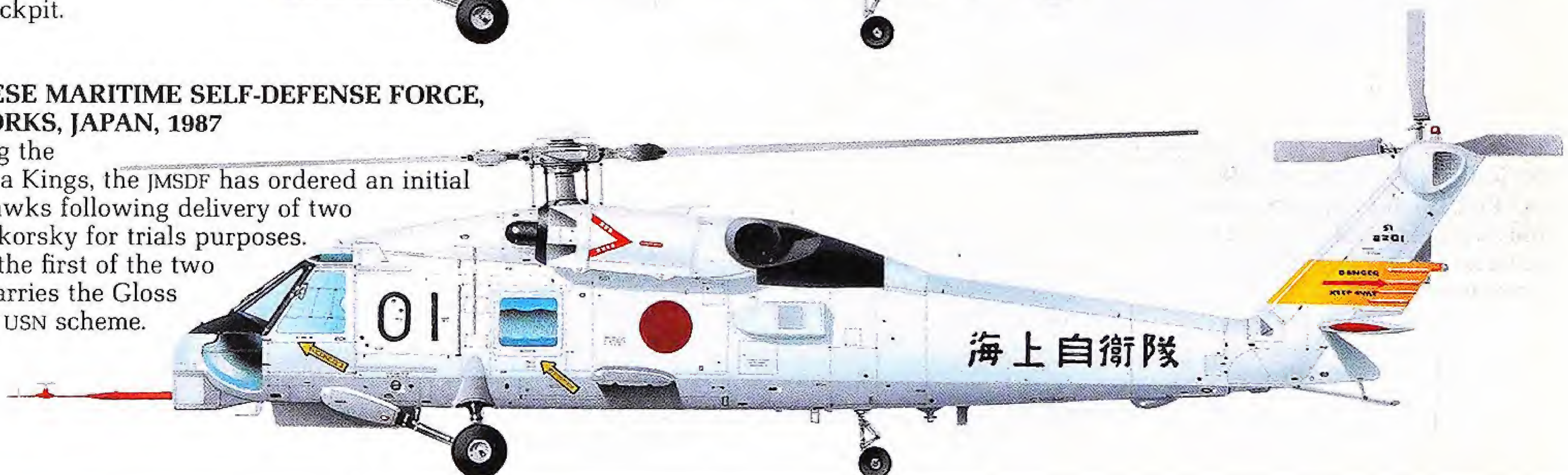
SH-60B, HSL-43, US NAVY, NORTH ISLAND, USA, 1986

Low visibility Compass Gray is the current scheme for Seahawks with compatible insignia such as the TT unit code on the fin and aircraft number on the nose. In the main cabin is a highly-skilled sensor operator working a range of electronic equipment designed to detect and kill submarines, while the pilot and co-pilot share the front cockpit.



XSH-60J, JAPANESE MARITIME SELF-DEFENSE FORCE, MITSUBISHI WORKS, JAPAN, 1987

To begin replacing the current fleet of Sea Kings, the JMSDF has ordered an initial batch of 12 Seahawks following delivery of two machines from Sikorsky for trials purposes. Coded 01, this is the first of the two helicopters and carries the Gloss White-Gull Gray USN scheme.



WESTLAND LYNX

Since its first flight, on 21 March 1971, the Lynx has become established as one of the most versatile military helicopters in front-line service. In the Royal Navy, the Lynx equips the Small Ship Flights for anti-submarine warfare and anti-surface vessel duties, while the British Army Air Corps uses it as a tank-hunting battlefield helicopter armed with TOW anti-armor missiles. Nearly 400 Lynx have been built and overseas users include Denmark, South Korea, Nigeria, the Netherlands, Norway and West Germany.

HAS. Mk 3, 815 SQUADRON, RNAS PORTLAND, UK, 1988

The overall scheme of semi-gloss Dark Sea Gray has proved ideal for over-water flying. The letters "PO" are Portland base initials.



AH. Mk 1, ARMY AIR CORPS, MIDDLE WALLOP, UK, 1988

This green-gray disruptive scheme was recently adopted for its nap-of-the-earth ambush-style tactics against enemy tanks.



HAS. Mk 2 (FN) FLOTTILLE 31F, FRENCH AERONAVALE, LANVEOC-POULMIC, 1987

This example has an overall dark blue-grey finish, with the unit badge beneath the cockpit side window.



Mk 21, 1 ESQUADRAO DE HELICOPTEROS ANTI-SUBMARINOS, BRAZILIAN NAVY, SAO PAULO DE ALDEIA, 1987

Nine Lynx were bought by Brazil of which eight are in service. The finish is semi-matt.



GENERAL DYNAMICS F-16

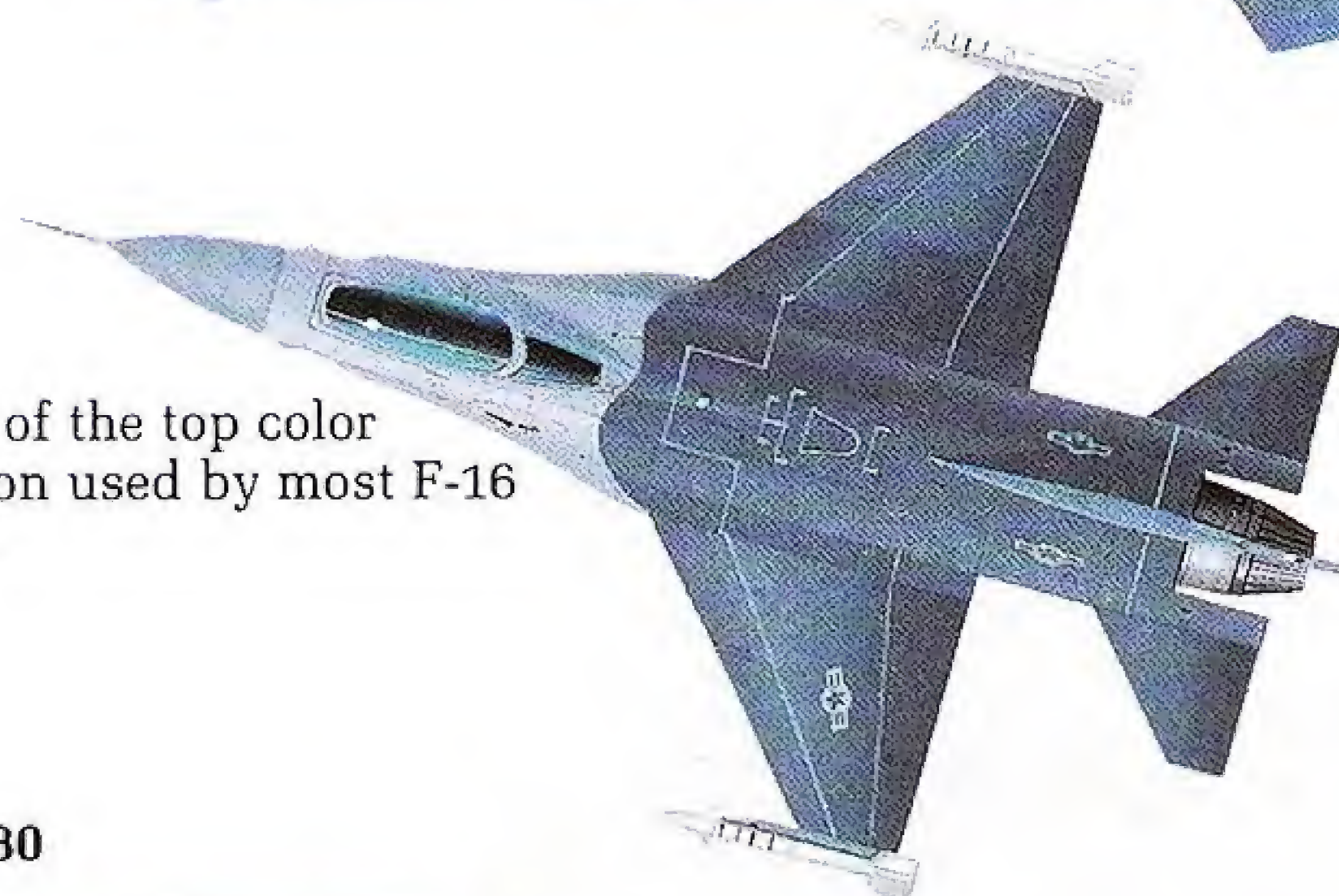
In aerospace history, the F-16 will probably go down as the fighter of the 1980s. Its diminutive-tailed delta shape symbolizes western air defense more than any other type and by 1990 more than 3000 had been ordered for 16 air forces. The prototype YF-16 flew on 20 January 1974 and the F-16A entered USAF service in 1979. This was followed by the first export order the following year. Single and two-seat versions operate side by side, both being combat capable.

F-16A, 8th TACTICAL FIGHTER WING, USAF, KUNSAN AB, SOUTH KOREA, 1986

The C is steadily replacing the older A series aircraft and this unit has now re-equipped. By the cockpit is the "Wolfpack" marking next to the unit badge. National markings are toned down although the tail codes and serial remain black. Camouflage colors: (dark) Gray (36118), (medium) Gray (36270), (light) Gray (36375).

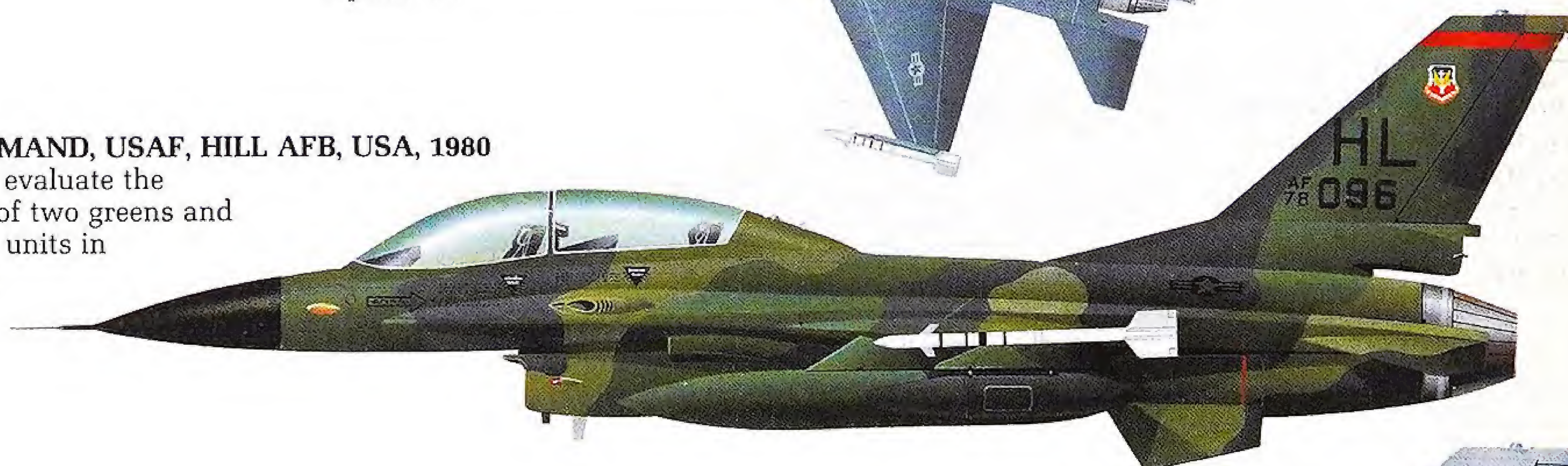


Plan view of the top color demarcation used by most F-16 operators.



F-16B, TACTICAL AIR COMMAND, USAF, HILL AFB, USA, 1980

Aircraft 78-0096 was used to evaluate the "Lizard" camouflage scheme of two greens and gray for possible use by F-16 units in Europe. To date this has not been adopted.



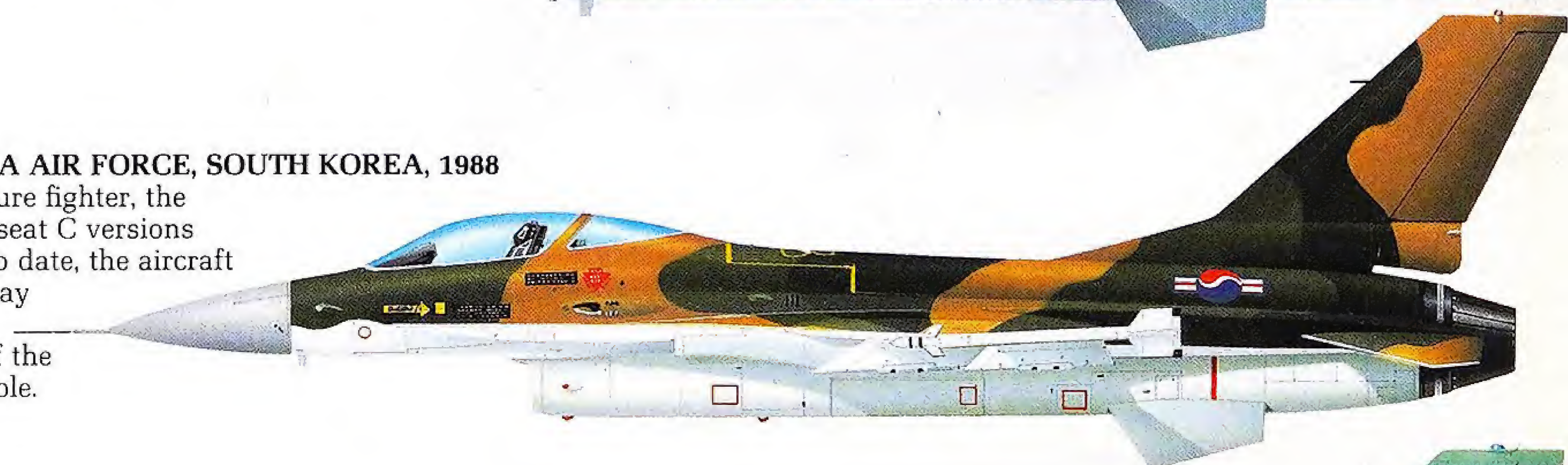
F-16A, 306 SQUADRON, ROYAL NETHERLANDS AIR FORCE, VOLKEL, NETHERLANDS, 1982

This unit is assigned the tactical reconnaissance role alongside 311 and 312 Sqn at the same base. The unit's eagle head badge is applied to the fin, and below is the aircraft number prefixed by the letter J which relates specifically to the F-16 in RNethAF nomenclature.



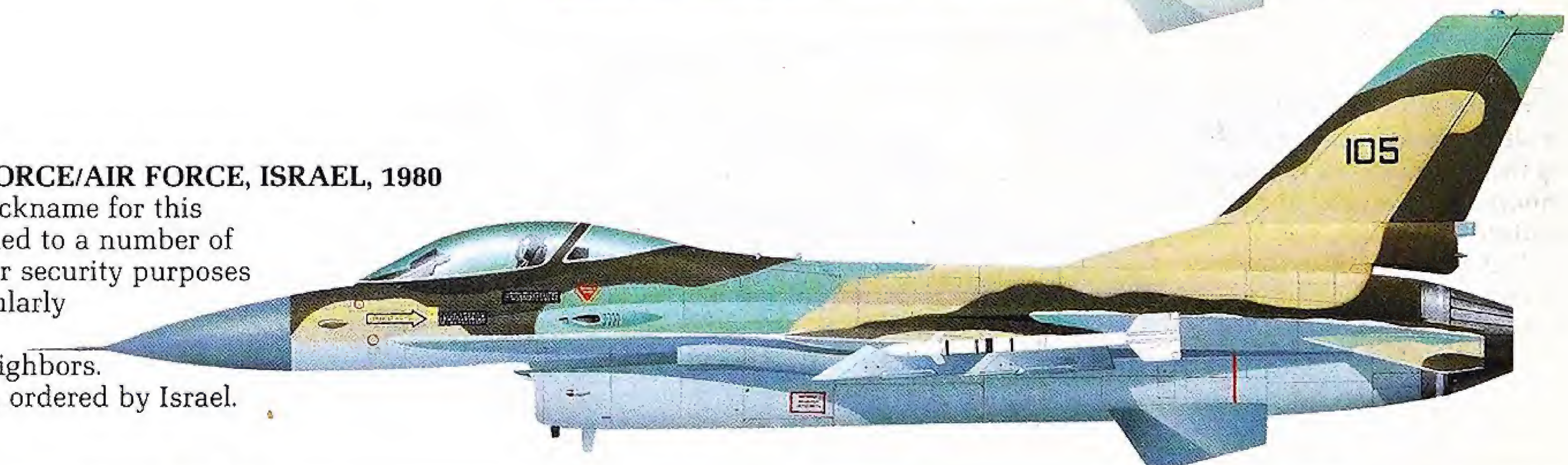
F-16C, REPUBLIC OF KOREA AIR FORCE, SOUTH KOREA, 1988

Pending a decision on its future fighter, the ROKAF has ordered 30 single seat C versions and six D combat-trainers. To date, the aircraft have been delivered in the gray air-superiority scheme, but this SE Asia finish is likely if the aircraft revert to the attack role.



F-16A, ISRAEL DEFENSE FORCE/AIR FORCE, ISRAEL, 1980

"Café-au-lait" is the IDF/AF nickname for this disruptive desert finish applied to a number of types including the F-16s. For security purposes the aircraft numbers are regularly changed to prevent strength assessment by unfriendly neighbors. To date, 210 F-16s have been ordered by Israel.

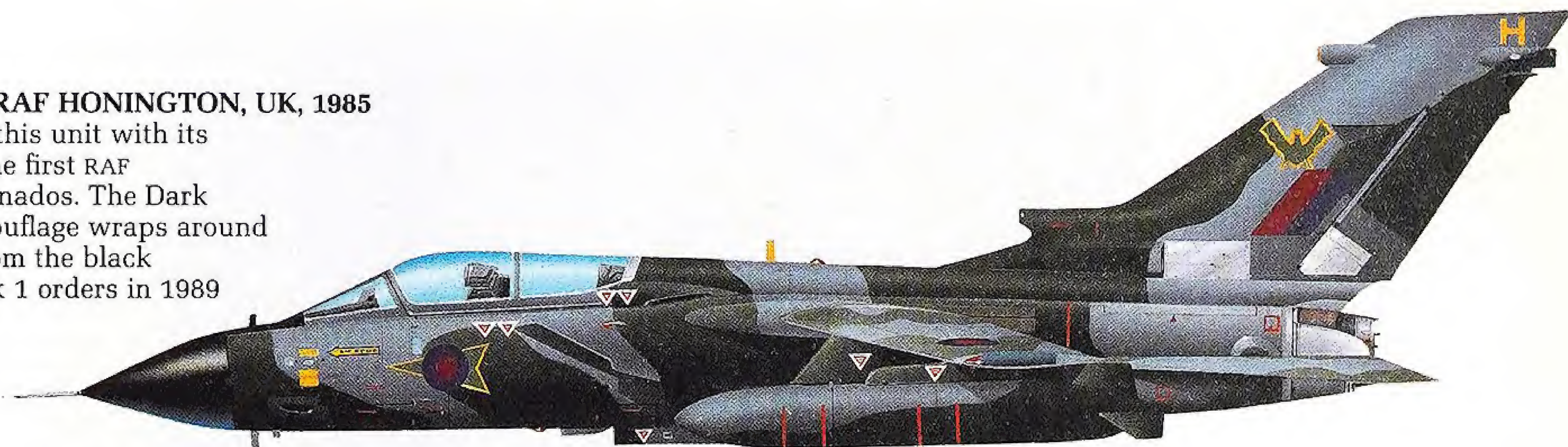


PANAVIA TORNADO

One of the most successful international programs in aerospace, the Tornado was developed by the UK, West Germany and Italy to meet a joint low-level attack aircraft requirement. The first prototype flew on 14 August 1974 and by late 1989, contracts had been placed for a total of 929 aircraft for the three nation's air forces (including 180 F.3 fighters for the RAF), the Royal Saudi Air Force, and Oman (temporarily suspended).

GR Mk 1, 9 SQUADRON, RAF HONINGTON, UK, 1985

Previously flying Vulcans, this unit with its famous bat insignia was the first RAF squadron to convert to Tornados. The Dark Green/Dark Sea Gray camouflage wraps around the whole aircraft apart from the black nosecone. Total RAF GR Mk 1 orders in 1989 stood at 255.



TORNADO, TRINATIONAL TORNADO TRAINING ESTABLISHMENT, RAF COTTESMORE, UK, 1984

More than 50 aircraft equip this unit, each carrying a tail code; RAF and Italian machines are prefixed B and I respectively. This G-coded German example retains the earlier light gray undersides.



TORNADO, 7 SQUADRON, ROYAL SAUDI AIR FORCE, DHAHRAN, SAUDI ARABIA, 1986

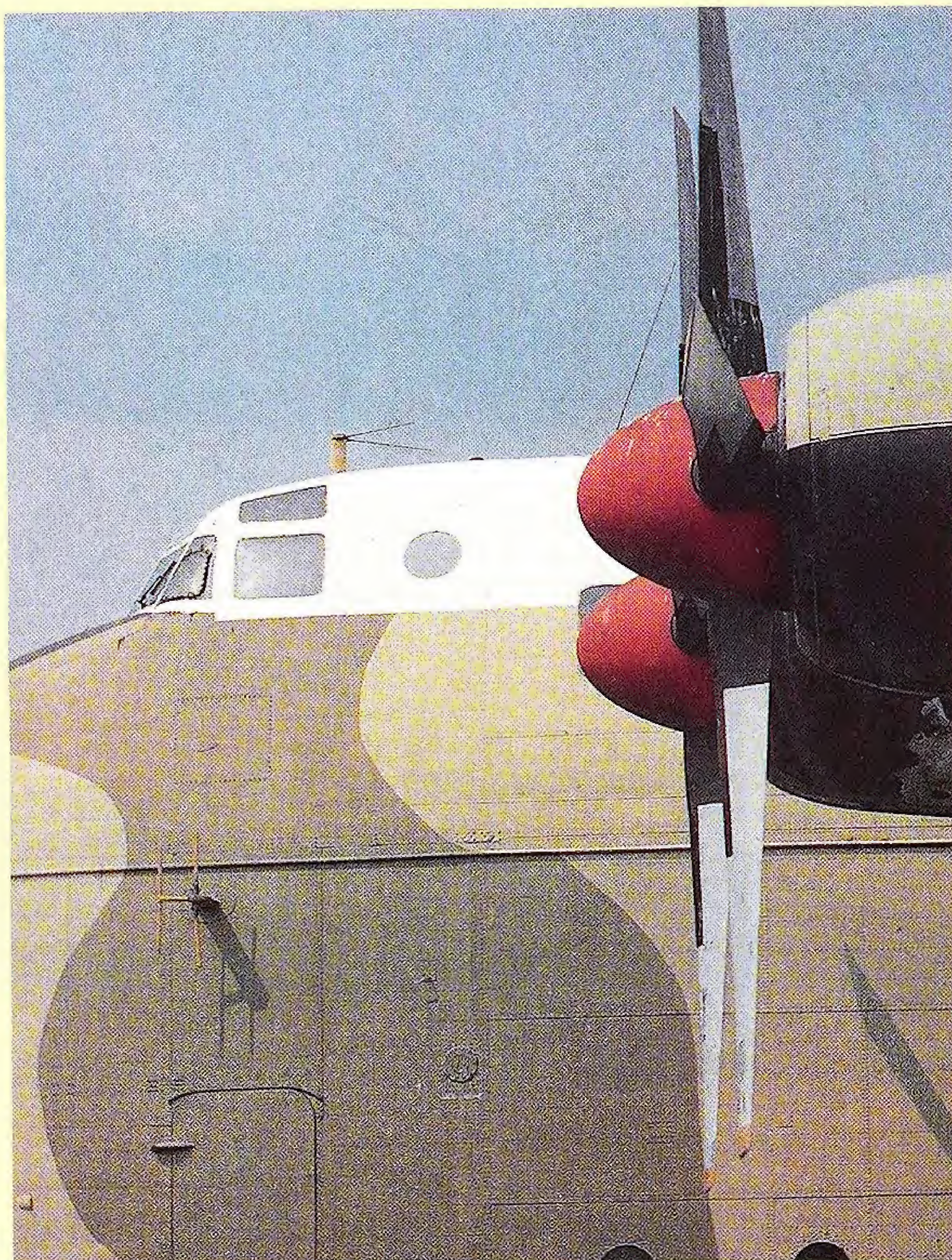
Sand, stone and green are the camouflage colors of the first 48 aircraft on order for this Arab air arm. All machines carry the squadron number as a prefix to the tail number. The wing insignia is applied to the port upper and starboard lower positions, with the initials RSAF in the opposing positions.



F Mk 2, 229 OCU, RAF CONINGSBY, UK, 1986

One of the initial 18 fighter versions which preceded the definitive F Mk 3. Armament of the air defense variant consists of Skyflash and Sidewinder AAMs and an internal 27mm cannon. The pale Barley Gray finish is standard on all operational machines. The F.2s will be updated to F.3 standard and will be redesignated F.2As.



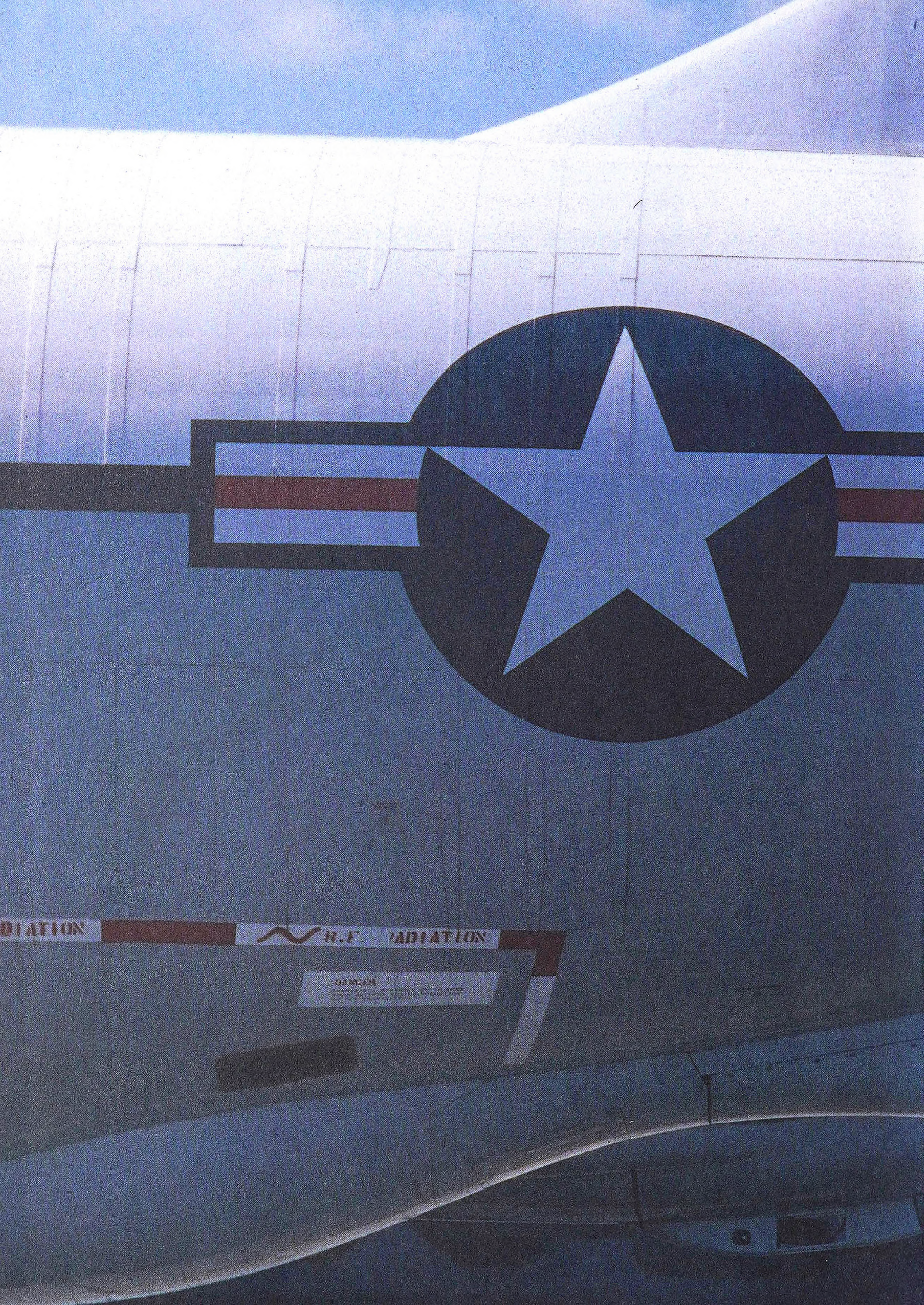


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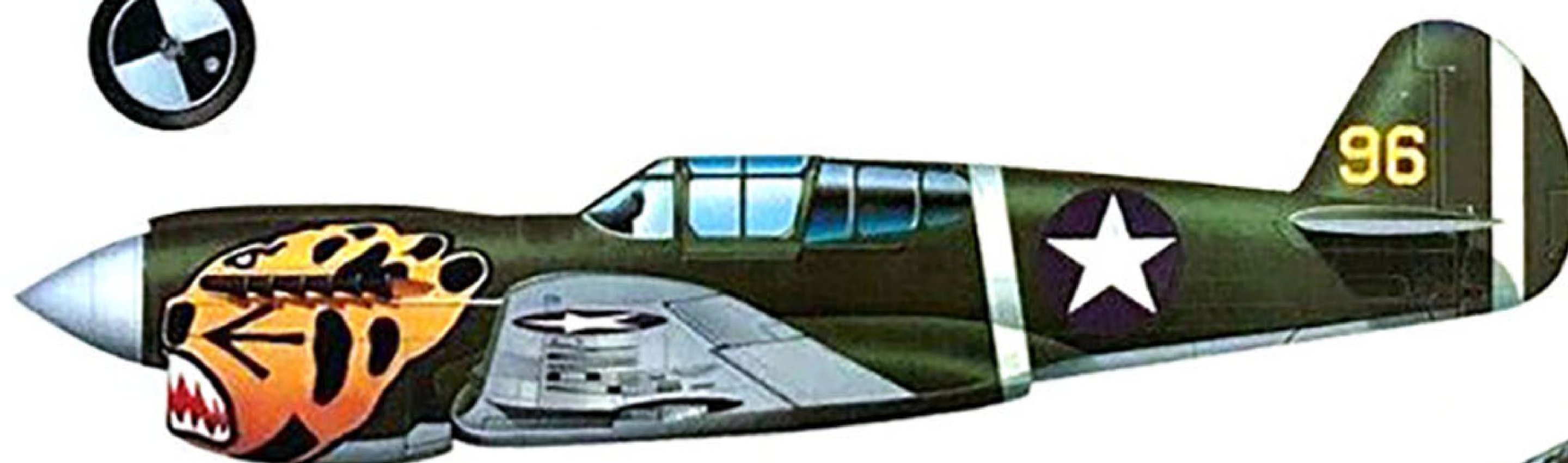


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